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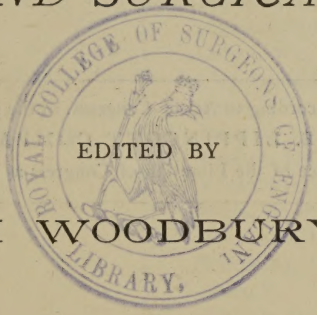

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FRANK WOODBURY, M.D.

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PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, OCTOBER 3, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE NEUROTIC ORIGIN OF CLUB-FOOT, INFANTILE PARALYSIS, AND LATERAL SPINAL CURVATURE; AND ITS RELATIONS TO PROGNOSIS.

Delivered at the Pennsylvania Hospital

BY THOMAS G. MORTON, M.D.,

One of the attending Surgeons.

GENTLEMEN,—At our last meeting I promised that I would show you this morning some cases illustrating the results of nerve-lesions, especially upon the nutrition of the parts to which the nerves are distributed. Let me first direct your attention to the cases before you, which, however, are not strictly of the class of lesions of nerves. They illustrate, to a marked degree, atrophy following club-foot, atrophy not confined to the muscles, but involving all the structures, including the bone, as the result of impaired nutrition. The affected leg, as you see in each of these children, is poorly developed, and is less than the sound leg not only in its thickness, but in its circumference.

I believe that club-foot is the result of a cerebro-spinal defect,—that is to say, at some point in the brain or along the spinal cord there is a lesion which reduces the nerve-supply of a group of muscles, and subsequently impairs the growth of the affected part. During fœtal development, at some period, there has been a disorder of the nervous system which has produced the club-foot. I have seen nothing in my experience to warrant the idea that congenital club-foot has ever been caused by spasm of the muscles, or by position in utero.

In connection with a case recently before you (of pericoxalgia), I told you that whenever there is inflammation involving the nerve-trunk you must expect to have atrophy in the limb; not absolute, but relative, as compared with the other extremity. Remember to warn your patients of this, for it occurs in every case of well-marked hip-joint disease as the result of want of nutrition, and this condition will remain and cause more or less permanent deformity.

Wherever nerve-filaments are included in a focus of inflammation there will be a certain degree of sclerosis of the nerve, or a degeneration extending up towards the spinal cord. As a result there is defective nutrition, owing to central change, from extension of the process into the motor area in the anterior columns of the cord. The child may grow well elsewhere in all portions of its body, but the structures of the limb—the bone, muscles, and skin—show defect of growth. Of course, if you examine a case of hip-disease, you will not expect that you will be able in the very early stage to find this atrophy, but in the course of time it will become evident.

Let me show you this boy, 10 years of age, who came to me a year ago for treatment. I find upon applying the tape that the right leg measures around the calf ten and one-quarter inches; the left, barely nine and one-quarter inches. By noticing carefully the boy's feet, you will also observe the difference in the length of the feet, the right being nearly an inch longer than the left. This is not because he has had simply a disease of the bone,—for you will often find, after a resection of the humerus in which a large amount of the bone was removed, that the growth of the lower portion goes on as before,—but it is because there has been an inflammation which has affected the nerve-supply, a process of sclerosis in the nerve-trunk interfering with function. It might be urged that this atrophy has been caused by want of use; but that would not apply to the diminished length of the leg and foot.

I need hardly say to you that in a case of coxalgia, if you can arrest it in its early stage, with as yet very little inflammation of the surrounding structures, the result, as regards the future usefulness of the limb, will be better than if the disease had been allowed to go on. There will be a less amount of atrophy, and perhaps, if the nerve-trunk escapes, none at all. Therefore you should make special efforts to arrest the disease early, in order to secure the growth and usefulness of the limb.

This little girl, 12 years of age, had hip-joint disease about a year ago. The left calf now measures seven inches, the right seven and a half. A greater difference is found in the measurement of the thighs at the upper half, where it is an inch and a half. This is the usual history of a case

of this kind. The joint is at present entirely free of inflammation, although partly anchylosed.

Now we come to cases of infantile palsy. According to my experience, it is impossible to have infantile palsy of some duration without its being followed by permanent changes in the nutrition of the affected structures. A certain amount of nerve-degeneration takes place which is never repaired. The same condition exists, in effect, in club-foot, in serious inflammatory diseases of the large joints, and in infantile palsy. Will not the function be restored and the nutrition so improved in such cases by massage, electricity, and exercise, that the patient will get well? I say, no. The case may, and doubtless will, improve, but the affected limb will never bear a favorable comparison with its better-developed fellow on the opposite side.

This boy, 2 years of age, has a history like that of hundreds of others. At two years of age he had severe entero-colitis, lasting for some weeks. Afterwards infantile palsy occurred. Upon looking at the right leg, it is seen to be short: the bones have not grown to the same length as in the left. Now, it is simply impossible for this limb to develop like the other. In one we have a healthy set of nerves nourishing the limb; in the other there is evidently defective nutrition. I lay stress upon this, because if you do not warn the parents or guardians of the children that this must be expected, you will be blamed for it, and if a bad result follows it will be attributed to improper treatment. I find here (upon the right side) the calf is six and a half inches in circumference, and eight inches upon the other. The thighs show the same. One foot is warm, the skin looks red; the other foot is cold and blue, —a result of impaired circulation.

These cases, unfortunately, are apt afterwards to fall into the hands of quacks, who take the opportunity to throw blame upon the attending physician. The statement has been made that by putting the limb in a vacuum the case will recover. This is a fallacy: no such improvement can be hoped for.

In club-foot we have the instance of some nerve-fibres losing their functions, while others remain intact. Where we have the peronei muscles defective, the heel is lifted by the tendo Achillis, the inner border of the foot drawn upwards by the anterior tibial muscle, and the front of the foot twisted inwards by the posterior tibial and the long flexor of the toes, and varus is produced. If, on the contrary, the peronei are stronger, there will be talipes valgus; if the calf-muscles are unresisted, there will be equinus; if the extensor muscles are relatively stronger, there will be calcaneus or its compound forms. Although no spasm is present, yet the weak muscles yield to the stronger ones. Here palsy manifests itself in the peronei muscles, which are not much changed yet. But I find what we often see in many cases of infantile palsy: nature has thrown out material to protect the joint. We have a weak ankle, and nature throws out a great deal of dense fibrous material to make up for the weak ligaments, making the joint swell so as to look like a fracture or dislocation. The right calf is eight inches and the left eight and a half in circumference. If you should see this child a year from now, this difference will be still more marked.

This condition of defective innervation of muscles may be present at birth, and the case will then be called "congenital club-foot," even if the deformity be not noticed until some time afterwards. On the other hand, where the nerve-lesion is produced after birth by traumatism or disease and this deformity is the result, it is then known as "acquired club-foot."

The same principle of defective innervation extends to spinal disorders. In a case of ordinary curvature of the spine, where you have a set of muscles upon one side of the spine weaker than that upon the other side, you will have lateral deviation. This may occur in the course of only a few weeks. If proper treatment is begun early, the disorder may be arrested; but the same thing occurs as in other joint-inflammations: there is sclerosis of the nerve-trunks and resulting atrophy. In such a case you will find, upon examination of the arm and leg of the affected side, an actual diminution of size as compared with the opposite side of the body. This lateral deviation, let me say, is not a bone-disease, like the posterior curvature: it is simply due to a loss of strength and impaired nutrition in the muscles of one side of the body. This lateral curvature is not produced by carrying a weight or by leaning with one arm upon the table. Not at all. It is primarily a disease of

the nerves which emerge from the spinal column in the dorsal and lumbar regions, and the deformity results from weakened muscles,—the spine being pulled over, like a bow, by the stronger muscles of the opposite side. There is a convexity towards the weak muscles, and this is called the pathological curve; farther down there is a curve in the opposite direction, called the compensating curve. If you examine closely a case of lateral spinal curvature, you will always find this double or S-shaped curve.

Here is an adult woman who has been wearing an apparatus for relief from a lateral spinal curvature. Upon examination, there is evident diminution in volume of the mass of muscles upon one side of the spine; the arm above and below the elbow is considerably smaller than the healthy arm. This want of symmetry extends throughout this side of the body; even the mammary gland is smaller than upon the healthy side.

Therefore, lateral curvature of the spine, in most cases, and especially in youth, is simply the result of defective innervation, —which is worth keeping in mind in the treatment. We must be on our guard in the prognosis, and give the family of the patient notice that they cannot expect a perfect result where the nerve-supply is so decidedly defective.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,

Professor of Otology in the Philadelphia Polyclinic.

ARTIFICIAL MEMBRANA TYMPANI.

DR. BARTH, of Berlin (*Archiv für Ohrenheilkunde*, Bd. xxii. p. 208, August 12, 1885) has suggested a very good modification of the ordinary cotton-wool membrane, as follows:

Take a piece of cotton-wool, and pull or twist out one end of it to the length of four centimetres, leaving a tuft at the other end. The handle thus made should now be dipped in collodion, and the whole, supported by means of the tuft through the mesh of a cane-seat chair, allowed to dry. In the course of five or ten minutes the handle or shaft should be again twisted, best with moist fingers, and there is then provided a strong shaft of cotton-wool one to two millimetres thick, with a brush-like tuft, which can be further trimmed by the scissors as required. This artificial membrane is so simple and so easily made that every intelligent patient can make it for himself if he is obliged to wear such an aid for any length of time.

OPERATIVE REMOVAL OF THE MEMBRANA TYMPANI AND THE TWO LARGER AUDITORY OSSICLES IN SCLEROSIS OF THE TYMPANIC MUCOUS MEMBRANE.

Prof. August Lucae, of Berlin (*Archiv für Ohrenheilk.*, Bd. xxii. pp. 235–242), has given his experience with this operation between the years 1880 and 1882. At the outset he states that his results have been of a nature to entirely cool his interest in the operation, which he might have anticipated *a priori*, in the opinion of your reporter.

It is interesting, however, to see to what lengths an operator will sometimes go in order to say he has done certain things. Lucae has performed the operation fifty-three times, on forty-seven individuals; six times on both sides. In all cases the hammer was removed, and six times the anvil was removed with the malleus. In all but five cases the operation was performed while the patient was under the influence of an anæsthetic.

The conclusions of this operator are that the operation is devoid of danger; but the results, so far as relief of tinnitus and deafness are concerned, are so unsatisfactory that he adheres now to the therapeutic means, and especially to passive motion by means of his "spring-sound."

THE ACTION OF COCAINE IN AURAL SURGERY.

Dr. F. Kretschmann, of Halle (*Archiv f. Ohrenheilk.*, Bd. xxii. p. 243), has kept careful notes for some time of all cases of ear-disease treated by cocaine in the clinic of the University of Halle. The cocaine has been used in all cases in five-per-cent. solutions of the hydrochlorate. The application has been effected either by instillation or by soaking cotton and passing the latter down the auditory canal upon the membrana tympani or upon some point chosen for incision. The period allowed for the application to take effect has not been less than fifteen minutes nor more than twenty minutes. In affections of the nares or naso-pharynx, the applica-

tion has been made by the camel's-hair brush directly to the spot to be anæsthetized, and this operation repeated two or three times, if necessary, at intervals of five minutes. The conclusions of the observer are as follows:

1. In operations on the membrana tympani, the anæsthetic action of cocaine (five-per-cent. solution) is uncertain.

2. In operations on the tympanic mucous membrane, cocaine has an anæsthetic effect. It fails, however, if the cut be deep enough to invade the subjacent bone.

3. In operations on the nasal mucous membrane, cocaine has both an anæsthetic effect and one which abrogates the reflex susceptibility.

4. In rhinoscopy, cocaine allays gagging and relaxes the soft palate.

In this connection, attention is drawn to the anæsthetic effect of brucine in painful affections of the ear, as first announced by the reporter in a paper read before the American Otological Society at New London, July 12, 1885, entitled

THE LOCAL USE OF COCAINE AND BRUCINE IN DISEASES OF THE EAR,

in which he stated an experience of negative results with cocaine as an anæsthetic in the ear, but reported very good results from applying five-per-cent. solutions of brucine to the ear. Its application as a local anæsthetic to the ear was tried in the Philadelphia Polyclinic at the suggestion of Dr. Thomas J. Mays. The solution employed was five per cent. of brucine, to which hydrochloric acid had been added in the proportion of five drops to the gramme; and in all the cases treated with this preparation of brucine the relief to pain had been prompt and complete, a result far more satisfactory than any obtained by him in the ear by solutions of cocaine. The applications to the ear were made by means of cotton on the cotton-holder, soaked with the solution of brucine.

Kirchner (*Deutsche Med. Wochenschrift*, No. 4, 1885) began with a two-per-cent. solution of cocaine, but found that nothing short of a twenty-per-cent. solution was sufficient to produce anæsthesia of the membrana tympani. But even with this the result is by no means sure,—an experience similar to that of Zauful (*Präger Med. Wochenschrift*, No. 7, 1885). The latter has had negative results in producing anæsthesia with solutions of cocaine in the membrana tympani; but he has found that in large perforations of the membrana the mucous membrane can be reached and anæsthetized by cocaine, so that granulations can be removed without great pain (*Archiv f. Ohrenheilk.*, Bd. xxii. p. 284, August, 1885).

INTRA-PETROUS GANGLIA OF THE AUDITORY NERVE.

Vulpian presented to the Académie des Sciences, March 24, 1885, for G. Ferré, an account of investigation on the above-named subject (*Annales des Maladies de l' Oreille*, etc., Juillet, 1885).

These ganglia are three in number: one is situated on the vestibular nerve (ganglion of Scarpa), the second upon the external fasciculus of the expansion of the cochlear nerve, and the third is arranged spirally the entire length of the lamina spiralis (this is the ganglion of Rosenthal or of Corti). All the branches issue from the auditory nerve and pass thence through a collection of ganglion-cells. This cellular mass or cushion is unique, as ganglionic nerve-cells are not found in the terminations of the auditory nerve. The three nervous ganglia thus form a zone of cells analogous to that found in the retina, probably to that composed of multipolar cells.

PSEUDO-MENINGITIS OF YOUNG DEAF-MUTES.

Dr. Boucheron, in the *Revue de Médecine*, May 10, 1885, under the above title has presented an account of a grave complication of otitis media in infancy (*Annales des Maladies de l' Oreille*, July, 1885). This consists in a destruction of the labyrinth-nerves by compression, the result of the forcing inward of the foot-plate of the stapes. The clinical forms of the otitis media are variable, sometimes being accompanied by general symptoms of a grave nature, as convulsions, coma, and fever, so that the physician might well suppose he had to deal with a meningitis, were it not for the fact that an otitis is always attended with deafness, and also were it not for a pathognomonic fact of differential importance,—that the inflation of the tympanum dissipates the alarming symptoms. In some cases the lesions occur without marked symptoms in the early months or years of life. The child, hitherto lively and intelligent, becomes suddenly dull and irritable, and loses its hearing. It ceases to learn to

talk, or ceases to use the speech it may have learned, and thus becomes a mute. This may be brought about without any marked symptoms or convulsive phenomena and fever, *so that one may be inclined to think such children deaf-mutes from birth, whereas their deaf-dumbness is truly an acquired one and consecutive to an otitis media.*

No matter what may have been the course of the symptoms, these children are deaf in proportion to the lesion of the internal ear, the result of compression. In almost all of them the membranæ are found sunken, and there are signs of naso-pharyngeal and tubal catarrh, the primordial cause of the disease. It is well known that the offspring of consanguineous marriages are often deaf and dumb. These unfortunates represent the confluence of diathetic naso-pharyngeal and tubal catarrhs of their progenitors, rather than cases of degeneration.

Treatment.—In respect to prognosis and treatment, it may be said the first depends largely on the second, which must consist primarily in treating the naso-pharyngeal catarrh, and in the use of tympanic inflations.

We must express great surprise at and disapproval of the suggestion of Dr. Boucheron to chloroformize all patients in order to insert the Eustachian catheter. It is quite as surprising and seems as unskilful as would be the suggestion to etherize the patient before introducing the vesical catheter.

ABSOLUTE UNILATERAL DEAFNESS FOLLOWING MUMPS.

Dr. Ménière (*Société Française de Laryngologie et d' Otologie*, April 2, 1885) reports two cases of deafness in one ear supervening upon mumps. He supposes that in all cases of deafness thus supervening upon mumps there is always a lesion of the meninges, the symptoms of which may be so evanescent, occurring at night, as to escape the attention of the friends and physician of the patient. He holds that the process is similar to that which he has observed in children who become deaf-mutes between the ages of one and five years, and in whom the cerebral involvement appears suddenly in the night, but is rapidly dissipated by morning. The event corresponds, in his opinion, with dentition.

AURAL DISEASE IN DIABETES MELLITUS.

The discussion of this subject is again broached by Kirchner (*Monatsschrift für Ohrenheilkunde*, No. 12, 1884), who claims that in this disease of the kidneys it is not uncommon to observe symptoms of catarrhal otitis media. It is usually consecutive to naso-pharyngeal catarrh, to which diabetic patients are generally liable. It may also arise, especially in the aged, from circulatory disturbances due to arterial sclerosis. The impaired vitality of the diabetic is used to explain the facility with which purulent inflammations arise in them, with their extensive and rapid effects.

An account of a case is then given, that of a young man, 22 years old, suffering from diabetes, and in whom there suddenly occurred in the right ear intense pain. There was found a marked otitis media, which necessitated a paracentesis of the membrana tympani. In the next few days there occurred a spontaneous rupture of the left membrana, which had been seen to be deeply congested at the time of the first examination. Suppuration continued in both ears until death occurred. Six weeks after the beginning of the aural disease there ensued a redness of the mastoid and a swelling from the tip of the latter towards the lower jaw, in consequence of which Dr. Kirchner felt justified in surgical interference. He met, at the point of the mastoid process, a small fistulous opening, which he made wider by chisel and gouge. Five days after the operation death ensued, being preceded by considerable sphacelus in the wound. The post-mortem examination showed that the right mastoid process formed one large cavity, and that the sigmoid fossa was perforated from the upper edge of the petrous pyramid throughout its entire length. On the left side the destructions were nearly of the same extent. Kirchner wisely advises to abstain from operating on diabetic patients except in the most urgent cases.

AUDITORY DISTURBANCES CAUSED BY EXPOSURE TO THE DISCHARGE OF FIREARMS.

Dr. Boucheron, of Paris (*Revue Mensuelle d' Otologie*, etc., May, 1885) has examined into cases of aural compression in adults, caused by the detonation of firearms. It is stated that very often the surgeon meets cases of deafness in those who have been

using firearms. In such cases it is held that at the moment of the accident—*i.e.*, at the moment of the impact of air from the concussion upon the membrana—there is an obstruction in the Eustachian tube. The concussion of the surrounding atmosphere induces sudden compression of that enclosed in the drum-cavity, and, secondarily, a compression of the nerves in the labyrinth. If the lesion be slight, the hardness of hearing is transitory; if it be more intense, the nerve-filaments are destroyed and the hardness of hearing is permanent. In those individuals exposed to analogous noises, such as boiler-makers, similar accidents are met with, but only where there is obstruction of the Eustachian tubes from precedent catarrh.

A prophylactic measure recommended consists in advising boiler-makers, artillerists, and those similarly exposed to great noises, to make efforts at deglutition (which tend to open the Eustachian tubes) before being exposed to violent noises or explosions.

The curative treatment consists in inflating the tympanum, in order to restore the membrana tympani to its normal position and thus put an end to the compression.

CHOLERA ASIATICA.

Read before the Microscopical and Biological Section of the Academy of Natural Sciences

BY W. XAVIER SUDDUTH, M.D.,

Director of the Physiological and Pathological Laboratory of the Medico-Chirurgical College, Philadelphia, Pennsylvania.

IT would be unnecessary and presumptuous for me to enter into any lengthy description of the ravages of cholera or its clinical history. Our knowledge in the past has been mainly confined to those phases of the disease. What I have to present to-night will in the main refer to some new light that has been thrown on its etiology; although there yet remains considerable to be cleared up with regard to discoveries which have recently been made.

Cholera is an endemic disease in India, and has repeatedly spread westward in the form of epidemics, none of which have exceeded its first advent in 1817, when it visited nearly every portion of the inhabited globe. It again made its appearance abroad, and first found its way to the United States, in 1832, and again in 1834. Subsequently it has visited our country in 1849, lasting till 1852; and again in 1866–67; and, lastly, in 1873. It is on its march again, and may reach here some time during the heat of summer.

One feature especially noticeable about its travels is that it has never shipped aboard the vessels rounding the Cape of Good Hope, or, doing so, it has worn itself out during the passage; the discipline, good hygiene, and regular diet subserving to good health during this long voyage and seeming not to form a suitable field for its propagation. Born and nurtured in the filth of the thickly-populated East Indian countries, it travels by short stages, following the lines of commerce, its spread being, beyond doubt, by actual contact. It is not carried by the trade-winds, nor is it contagious in the same sense as smallpox, scarlet fever, or measles. It is conveyed both by drinking-water and by food. History gives ample proof of its communicability by soiled linen, sewage, etc. It is a respecter of no age, sex, or condition in life. In its ravages it cuts down the rich as well as the poor; but its fatality is greatest among the intemperate. Its ravages are most marked in hot, moist climates, low rather than high altitudes, and the summer rather than the winter season.

Living in badly-drained, crowded cities, eating improper food, all manner of excesses, and mental depression, predispose to cholera. Lastly—and, I consider, *mostly*—is a previous epidemic of sporadic cholera dysenterica. Our British cousins learned this lesson long ago, and have profited by their knowledge: they instituted a strict surveillance over the city of London when it appeared, dividing it into districts in which physicians, officially appointed, were daily to visit and personally examine those living in them, and treat every case of dysentery found. Drawing their conclusions from the results obtained by this course of treatment, some English authorities are loud in their assertions that epidemic cholera is only an aggravated form of dysentery. It was an excellent line of procedure, and they builded better than they knew. We accept their treatment, but, in doing so, claim that it is only precautionary treatment and useful only in that it lessens the liability to infection.

For the propagation of any bacterium,

four things are essential: 1, a living germ; 2, depressed or decaying organic matter; 3, heat; and, 4, moisture. The germs of disease, micrococci, are ever present in the air we breathe, the water we drink, and the food we eat; and yet we live,—and why? Because not all the essentials for the propagation of disease are present at one and the same time in our bodies. Yet in your and my mouth to-night are probably germs that, if injected into the circulation, would cause death in a few days. The experiment of inoculating rabbits with normal human saliva has been tried often, and often resulted fatally. In normal epidermis and mucous membrane nature has provided a coat of mail against the entrance of these germs of disease into the circulation; but when these surfaces become abraded or their *vis vitæ* lowered from any cause, and the other essentials for the propagation of any specific germ that may be present are not wanting, then we have that special disease developed. When the germ-theory was first promulgated there were many who doubted, and there are yet, for that matter. They seem to clog the wheels of scientific progress, but in reality they only make the foundations of science firmer; and, although they may attain an ephemeral notoriety by boldly denying and demanding more proof, yet, in the end, the very opposition sets the true scientist to work to prove his views. Those who have been the leading believers in the germ-theory have had an especially hard hill to climb. If you take into consideration the small number of physicians who are experts in the use of the microscope, and then think of the vast number who have to depend on these few for their light in this investigation, it is really surprising that the theory has gained ground so rapidly as it has. It has had to fight every inch of the way. The masses of the profession have not been satisfied with the persistent discovery of the same form of bacilli in a certain disease, but he who found it must be able to cultivate it through successive cultures, and by inoculation on animals reproduce the disease.

Regarding the etiology of cholera, until the last twelvemonth all efforts to discover its specific cause, either in the air or in dejections of patients affected with cholera, had proved futile. The leading scientists of the day had to admit the plausibility of the application of the germ-theory in order to account for the origin and epidemicity of the disease. The germs evidently were capable of self-multiplication outside of the body; but all the known methods that could be brought into use for their demonstration failed to discover them.

The difficulties seemed insurmountable until Dr. Koch, stimulated by the oft-repeated failures of others, determined to go to Egypt and begin his investigations, and, if need be, follow the epidemic up to its home in India. He had not been long there until he reported that he had discovered a new genus of bacilli in the water-tanks of that country. Soon followed the finding of these in the intestines of patients who had died with cholera. He returned home, and began a series of experiments on animals with pure cultures. These results were negative at first, and he only partially succeeded in thus reproducing the disease.

When the epidemic broke out in France, it found Koch still hard at work trying to unravel the mysteries that surrounded its reproduction, by inoculation, on the lower animals. The French authorities sent for him to come to France, and, if possible, institute some methods that would ameliorate the ravages of the dreaded scourge. Soon after his arrival in Toulon a patient in the hospital sickened and died with cholera. This was a particularly favorable case for investigation, and, as the slide I have to show you to-night is made from a pure culture-solution obtained from this patient, the history of the case will interest you.

The patient was by occupation a sailor; had been admitted to the hospital for an attack of typhoid fever, but was convalescent, and was to have been discharged at noon. At 10 A.M. he was seized with cholera and died at 11 A.M., and within five minutes thereafter the autopsy was made and some of the contents of the small intestines examined. The same bacilli were found that had been previously discovered by Koch in India. Still the problem remained unsolved. Koch fully believed that he had made the long-wished-for discovery, but it remained to be proved. He cultivated this latter material up to the thirteenth generation, if I mistake not. In his experiments on the different media he found that the comma-bacilli (as he has termed them, from their resemblance to

a German comma) developed very characteristically on solid media, and liquefied the gelatin-culture media in a peculiar manner. They also grew very rapidly in bouillon, milk, serum, potatoes, and Japanese isinglass. Dr. Koch found out one very essential point in the culture of the comma-bacilli, and that was that the very greatest care must be observed in neutralizing the acidity of the bouillon, the presence of the least trace of acid being sufficient to prevent their development. In suitable media the comma-bacilli proliferate with remarkable rapidity at a temperature of from 86° to 102° F. They resist a very low temperature, +15° F. When the conditions are suitable for their development they multiply very rapidly, sometimes assuming the form of spirilla: in fact, they very much resemble the genus *Spirillum* in more ways than one. They are individually exceedingly short-lived. They also develop rapidly on soiled linen and in damp earth.

Koch's method of cultivating the bacilli is about as follows: "A small quantity of gelatinized pepton bouillon is inoculated with a little of the slime taken from the small intestine near its termination at the cæcum. The bouillon is then warmed until it becomes fluid, when it is poured on to a sterilized glass plate and spread with a sterilized glass rod. This is protected from the air by placing it underneath a bell-glass. The air within is kept moist by water-soaked blotting-paper. In a short time the colony develops, first as an irregularly-shaped pale spot on the surface of the gelatin. This soon assumes a granular appearance, and looks not unlike small particles of glass. As development progresses, the colony sinks into the gelatin, by reason of the liquefaction of the media. The colony then presents as a whitish spot under the surface of the gelatin."

At first Koch failed to reproduce the disease in animals, as he afterwards found, because of the acid condition of the gastric juice in health. He has now succeeded in producing the disease in all its virulence by ligating the pylorus and introducing the germs into the duodenum. The passing of the germs through the human stomach is accounted for by the fact that the gastric juice is not in its normal condition at the time of inoculation. To demonstrate the comma-bacillus in the tissues of the body, harden small pieces of the small intestine in alcohol and then stain in methyl blue. The bacilli will be found in the glands. They have never been found in the blood. They are quickly killed by drying. Koch's favorite method of staining them is with an aqueous solution of fuchsin. They are best examined with the aid of an Abbe condenser and a high-power objective.

Treatment is based on the following facts: first, the most probable source of contagion is the water-supply; second, the germs find a suitable field for development in the intestines of those who have had a previous attack of sporadic cholera; third, the presence of an acid is inimical to the development of the germs; and, lastly, long sea-voyages seem to militate against the continuance of the disease, hence the feasibility of quarantine.

From the foregoing we deduce the following suggestions as regards treatment, or rather prevention:

1. In the advent of cholera, all traps and drains should be overhauled, and a pure supply of water should be obtained. In the absence of ability to comply with the latter, none but sterilized water—that is, water which has been recently boiled—should be drunk. Ice should not be put in the water-pitcher, but the water-pitcher should be placed in the ice-box.

2. Careful attention should be given to the diet. Only such food should be eaten as does not tend to cause cholera morbus. All excesses should be avoided, and the first sign of dysentery should be noted and prompt measures adopted to check it. An acid lemonade composed of dilute hydrochloric acid and distilled water, in the proportion of six parts to thirteen, should be kept in the house, and may be taken *ad libitum*.

3. A rigid quarantine should be instituted on all incoming vessels from ports where the epidemic prevails. This quarantine should apply not only to passengers, but to freight also. No vessel should be allowed to discharge her cargo under thirty days. The laws regarding the importation and disinfection of rags should be rigidly enforced.

These deductions have been made not from personal experience in the treatment of the disease, but from a close study of the clinical history and the latest published facts regarding the comma-bacillus. The specimen which I have the pleasure of showing you this evening is from a pure

culture made by Koch himself. It is stained with fuchsin, and the bacilli appear in the form of short, curved objects, varying from one-eighth to one-half the width of a blood-corpuscle. They are magnified about seven hundred and fifty diameters.

A REPORT OF SIX HUNDRED CASES OF LABOR.

Read before the Philadelphia County Medical Society, September 23, 1885,

BY H. LEAMAN, M.D.

FROM the brief notes I have preserved of the last six hundred cases of labor which I have attended I have taken the material for the report which I now present to you, which, I hope, will at least have the merit of bringing some important topics before us for discussion.

The average duration of each labor was fourteen hours and forty minutes. The average duration of first labors, which numbered one hundred and eighty-seven, was twenty-two hours. Of these, there were five recorded of over thirty years of age, with an average duration of twenty-five hours.

The difference of opinion that exists on the duration of labor doubtless arises, as has been stated, from the difficulty in determining the limit of the first stage. There is a difference in women as to the accuracy with which they record their internal sensations. Some are cognizant of the slightest nerve-impression and can state it with exactness; others are dull and only aroused by a decided sensation, and are inaccurate in their report.

Multiparæ are very apt to be inaccurate in their statements as to the time of the onset of the first stage. They will very frequently reply, when questioned, that they have had slight pains for several days, but have taken no account of them. Primiparæ are more certain in their observations, as they are in a state of expectancy.

The length of labor has been counted, in all cases, from the first onset of dilating pain, which is generally felt in the lumbar, supra-pubic, or sacro-iliac regions, and is accompanied by dilatation of the cervix. The termination of labor has uniformly been carefully noted at the time of the delivery of the head.

The first stage of labor may be said to vary in length from two or three hours to two or three weeks. The second stage of labor is a more constant quantity, and extends in duration from half an hour to four hours. The first stage of labor is the process by which the uterus is prepared for the expulsion of its contents; the second stage is labor proper, and is a more definite quantity. Allowing two hours for rotation and two hours for dilatation of the perineum, we have four hours as the maximum limit for this stage. The exact time of separation of the limits of the first and second acts of labor cannot always be easily determined. The importance of distinguishing this stage, however, cannot be too earnestly urged, for it is at this point that mistakes are made and the forceps often injuriously applied. Full dilatation having occurred, delay beyond three or four hours may endanger both the fœtus and the mother.

The hour of day at which delivery occurs is worthy of note. In my list, out of six hundred cases, three hundred and nineteen were born between the hours of 6 P.M. and 6 A.M.; ninety-five were born between 12 midnight and 4 A.M.; one hundred and thirty-three between 4 A.M. and 8 A.M.; and one hundred and twenty from 8 P.M. to 12 midnight. The greatest number of births during one hour was forty, between 7 and 8 A.M.; the least was twelve, between 12 noon and 1 P.M.

Six hundred cases are too few to determine anything positively, but may be sufficient to draw an inference. The uterine force rises, falls, and rests. There would seem to be some relation between labor-pains and the pressure of the blood in the arteries. When labor is progressing in a strong, healthy woman, it may terminate any hour. But if there is a lack of easy adjustment between the pelvic environment and the fœtus, or an unfavorable presentation, then the arterial pressure comes into consideration. This is also indicated by the prevalent use of drinks during the progress of tedious delivery.

Position and presentation were observed in five hundred and sixty-eight cases, thirty-two being born before I was able to reach them. Vertex left front was present in three hundred and seventy-six; vertex right posterior in ninety-five; vertex right anterior in fifty-three; vertex left posterior in twenty-three; breech-presentations occurred in eighteen, face- in two, shoulder- in one.

Of the four hundred and twenty-nine vertex front presentations, two rotated into the hollow of the sacrum and were born vertex over the perineum; the remainder all rotated under the pubes. Of the one hundred and eighteen vertex posterior presentations, in one the chin dropped and became a face-presentation; twenty-one rotated into the hollow of the sacrum and were born over the perineum (ten of these twenty-one were delivered necessarily by the forceps); ninety-seven rotated under the pubes (of these only six were delivered with forceps). I am inclined to think vertex posteriors must have given rise to the invention of the forceps.

The forceps were applied in ninety-four deliveries. Twice they were applied because the obstetrician was compelled to hurry in order to attend to something else, although this ought never to be done; twenty-five times merely to aid in the exit of the head; in sixty-seven cases they were applied to relieve from painful and protracted labor. The reasons given for their use were contractions of the superior strait; large heads and bodies; firm heads with closure of the fontanels; obesity and weak abdominal muscles; and vertex posterior, particularly when rotation takes place into the hollow of the sacrum.

The breech-position was present in eighteen. Of these, eight presented sacrum to the back; sacrum to the pubes in four; sacrum to left in five; sacrum to right in one. Two of these were born dead.

There were two face-positions. One of these was born dead, but previously had been driven down in the pelvis for two or three hours by ergot administered by a midwife. The other was turned and delivered alive.

The sequelæ of these labors were rupture of the perineum in fifty-three: twenty-seven of these were slight, twenty-six were sewed with two or three sutures. Of these, twenty did well and healed perfectly. The usual efforts to prevent this trouble were used in all but twelve. These twelve were born in my absence. The rupture occurred uniformly with the head-position. In one case the tear was due to syphilitic warts, and in another to a large caruncle. Frequently it is caused by too rapid termination of the second stage of labor. Frequently the perineum itself is at fault, from a lack of development.

There were nineteen still-born children. Death was apparently due in two to prolapse of the cord; in one to too long use of ether; in two to too much ergot; and in one to convulsions. The majority were due to causes unknown. There were three cases of puerperal fever, and all died. One woman was taken with variola, miscarried, and died, at about the seventh or eighth month. One was taken with scarlet fever on the second day after delivery, and died on the eleventh day of the eruption. Four had metritis, one pyæmia, one mania. One had an intercurrent attack of facial erysipelas, but no metritis. Pleurisy occurred in one case. Inversion of the uterus took place in one case (it was not produced by the attendant): the symptoms were rapid fainting and severe uterine contractions. Post-partum hemorrhage was unknown in this series of cases.

This review, imperfect as it is, is presented in the attempt to elucidate some facts which are so familiar as to be overlooked. The most important fact connected with the subject of labor is the force exerted by the uterus in expulsion of its contents. The law of labor is the law of the uterus. The question for the obstetrician is not merely how to "get it out," but, under the circumstances, how the fœtus can best be born. The estimates of the force exerted by the uterus usually given seem to me to be exaggerated.

Meadows, for instance, sets down the involuntary or uterine force at 3.4 pounds to the square inch; voluntary or abdominal, as given by Houghton, 38.6 pounds. The two actions in labor seem to be direct and indirect. Their action is similar to that of the direct and indirect muscles of inspiration. The direct muscle is the uterus. The indirect are the abdominal muscles and diaphragm. We may add also accessory indirect, as muscles of the extremities and the thoracic muscles. The action of the indirect and accessory indirect is simply to fix the uterus and conserve its energy: the expulsive effort is applied by the uterus in such a manner as to impel the child, by gentle and vermicular movements, to elongate and mould its presenting part, and finally deliver it through nature's viaduct.

During the past year I have used a pressure-gauge with marked satisfaction. With it I have been able to determine when it was necessary to break the waters. It has enabled me to determine the complete

dilatation of the cervix. It also aids us in determining the necessity for forceps; and, in short, it gives exactness to our observation of a case of labor. The hand may determine the presence of heat in the fever-patient, but the thermometer alone gives definiteness to the idea of temperature. A skilled obstetrician may know the progress of labor, but dynamometry offers him greater accuracy in determining the rate of descent of the fœtus.

In my experience I have seen but once or twice a purely natural and physiological labor,—*i.e.*, the expulsion of the ovum in its entirety (placenta, child, and fluid in the unruptured membrane). Ordinary labor as described is a modification of this, although the essential elements are the same. There is the mass of the fœtus, flexible and readily compressible during delivery; the water first escapes, while the placenta, really separated with the other elements, is ready to follow immediately after the child.

828 North Broad Street, Philadelphia.

SUDDEN DEATH FROM ŒDEMA OF THE GLOTTIS.

BY W. J. JONES, M.D.,

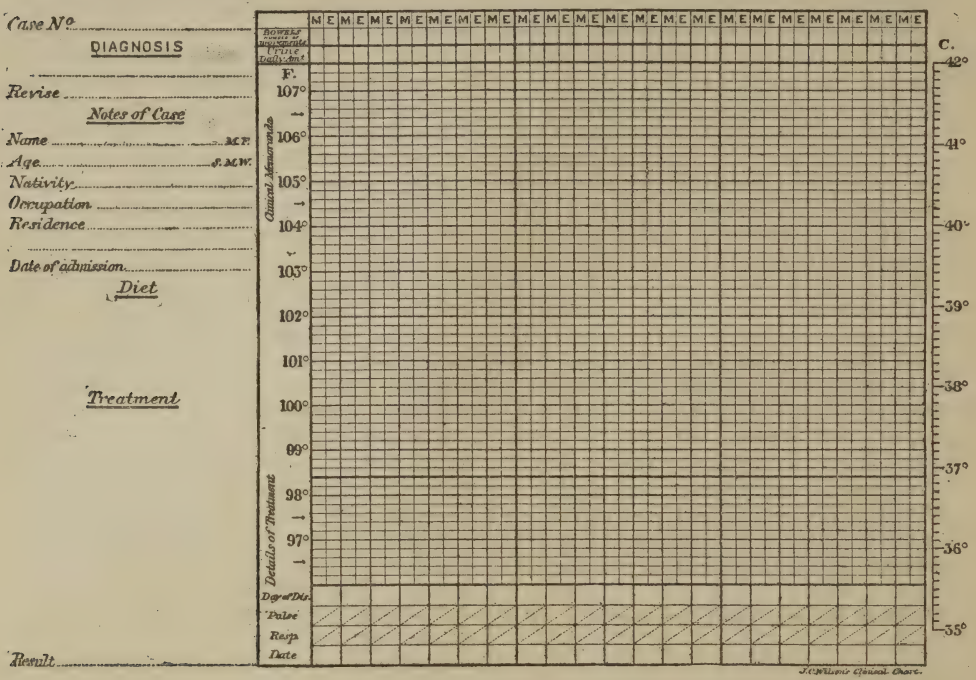
Resident Physician at Bay View Hospital, Baltimore.

THE following case will serve to show the clinical significance and pathological condition of œdema of the glottis.

J. B., colored, male, æt. 52 years, was admitted into the hospital at Bay View Asylum on the 24th of May last. He gave a history of having been a hard-working laboring-man, and the duties of his vocation often subjected him to considerable exposure. He was addicted to drinking a little too freely of alcohol at times, though not a constant drinker. He denied the history of any venereal disease. A careful physical examination of the patient showed that he was a large, well-built man. He gave no evidence of any disease of his lungs or heart. There was slight œdema of his lower extremities, which was not constant. An examination of his urine showed the presence of albumen and casts, and accordingly a diagnosis of morbus Brightii was made. Infus. digitalis was administered in ʒss doses thrice daily, and under its influence he seemed to improve until the morning of June 4, when, upon making my rounds of the hospital about ten o'clock, he complained of sore throat, inability to swallow easily, and slight dyspnœa. His lungs were examined, and air was found to enter freely. There was nothing to be seen in his throat to give alarm, though there was some slight swelling and redness about the fauces and the mucous membrane of the pharynx. The epiglottis, likewise, was red and thickened to some extent. Having no evidence at this time to lead me to suspect the fatal termination which so soon followed, I prescribed a simple gargle of potassii chloras, tinct. ferri chlor., glycerin, and water, and left him, promising to return again within an hour and make a more thorough examination into his condition. I was about to return to him at the time stated, when a messenger met me with the information that my patient was dead. An autopsy made a few hours after death showed the mucous membrane of the epiglottis and the entire larynx to be very much swollen and œdematous. This œdema reached to such a high degree as almost to occlude the entrance into the larynx. In the pharynx and on the posterior part of the tongue the follicles were somewhat enlarged; both lungs slightly adherent to the pleura at various places, otherwise normal; heart somewhat enlarged: left ventricle relaxed and dilated to some extent, valves soft; liver of ordinary size, and pale; spleen normal; kidneys of ordinary size, their capsules slightly adherent in places; the parenchyma hyperæmic.

The case is an important one from the fact of its rapid fatal termination and as to its cause. The suddenness with which the trouble began and the rapidity of its progress must be referred to one of the several causes of œdema of the glottis; and as our patient gave evidence both clinically and pathologically of morbus Brightii, and as œdema of the glottis may occur as the first and only dropsical affection connected with disease of the kidney, as stated by Flint, it is more than probable that the patient's kidney-disease was the prime factor in bringing about the cause which so suddenly terminated his life.

At the New Orleans Exhibition, the McIntosh Galvanic and Faradic Company received the first medal for fine display of electrical goods, and also the first medal for their combined solar microscope and stereopticon.



WILSON'S CLINICAL CHART.

DR. JAMES C. WILSON has devised a combined temperature-sheet and clinical chart, by means of which the daily records of the progress of a patient can be made at the bedside, while the chart, at the time of completion of the case, can be filed away for future reference. The advantages of noting important clinical facts in the presence of the patient, in the direction of accuracy and completeness, are too obvious to need discussion; while the convenience to the busy practitioner of having the records kept with the minimum of writing can scarcely be overestimated.

The plan of the chart, the dimensions of which are eight and a half by eleven inches, can be readily seen by a glance at the illustration (which is reduced to about one-fourth of the size of the original). The back of the chart is blank, so that the previous history and state of the patient when first seen may be entered, as well as the final note as to his condition when discharged; while the important facts of the clinical record and details of treatment can be written in the appropriate place upon the chart from day to day.

These charts are put up in tablet-form of fifty by the J. B. Lippincott Publishing Company. They have already been introduced into several Philadelphia hospitals, and have also been employed in private practice, where their usefulness is even more evident than in the wards of the hospital.

NOTES OF HOSPITAL PRACTICE.

MARYLAND WOMAN'S HOSPITAL, BALTIMORE.

CASES UNDER THE CARE OF PROFESSOR A. F. ERICH, M.D.

UTERINE HEMORRHAGE.

CASE I.—M. B., 22 years old, had been married since her fifteenth year; had had one child, five years ago; no miscarriages. Menstruation has always been profuse, lasting from five to ten days. For three months she had been bleeding almost constantly from the womb. She complained of pains in lower part of abdomen and pelvic region. The patient is stout and apparently in good health. The cervix was dilated by means of a sponge tent, and the interior of the uterus examined with the finger. Nothing abnormal discovered. Ten grains of nitrate of silver were intro-

duced into the uterine cavity and allowed to remain. The patient was placed upon house tonic (tincture of iron and quinine). The bleeding did not return, and in twelve days she was discharged well.

Case II.—A. S., 22 years old, married in her seventeenth year. Had been a widow for eighteen months. She had had no children and no miscarriages, according to her statement. Had almost constant metrorrhagia. Uterus retroverted and slightly enlarged.

A sponge tent, followed on the following day by a tupelo tent, enlarged the cervix sufficiently to permit an examination of the interior of the uterus with the finger. The mucous membrane was found covered with small, soft, fungous elevations, which bled readily on being touched. The patient was anæsthetized, and the uterine cavity thoroughly scraped out with a dull curette. Afterwards the cavity was swabbed with strong nitric acid.

On the following day there was a sanguineous discharge from the uterus, which soon ceased.

The patient was discharged from the hospital eight days after the operation. There was no return of the bleeding.

Case III.—J. W., 34 years of age. Had had two children and one miscarriage, last pregnancy terminating two years ago. Menses were always pretty free, lasting six to seven days,—being, however, regular in recurrence until the last three months, during which time the flow had been pretty nearly constant.

The uterus was enlarged and anteflexed, the cavity measuring four inches from os to fundus.

The cervix was dilated by sponge and tupelo tents until a finger could be readily passed into the cavity, when a rough mass was detected which was diagnosticated as the remains of a partially-retained placenta, which had become organized and firmly united to the uterine wall. Under anæsthesia this mass was scraped off with a blunt curette. Just before the operation the patient's temperature was 104.2°, which ran up to 105.2°. Under antipyretic treatment this was soon reduced, and on the second day afterwards the patient was cheerful, free from pain, and the pulse and temperature normal. On the twenty-second day after the operation the patient left the hospital well, and has had no return of the bleeding.

Case IV.—A. G. H., 38 years of age. Has been married sixteen years; had eight children and five abortions. Her last pregnancy terminated sixteen months ago. Her menstrual periods were regular until four months ago, since which time she has had constant hemorrhages.

The cervix was dilated with a sponge tent, and the dilatation completed by means of the finger. A blunt curette was then introduced, and a mass of tissue scraped away, which seemed to be the remains of placenta. The patient recovered without a serious symptom, had no return of the hemorrhages, and was successfully operated upon four weeks later for ruptured perineum.

Case V.—L. B., 33 years old, of large build, and well nourished. Had been married five years; had had one child and three abortions. There is reason to suspect that the abortions were intentionally produced. Since her last pregnancy terminated (in a miscarriage), five months ago, she had frequent profuse hemorrhages.

The cervix was dilated with a tupelo tent and the interior of the uterus scraped out with the dull curette. A large mass of tissue resembling spleen-substance was removed, being probably portions of retained placenta. The operation was done under ether, from which she recovered with slight nausea. Six days after the operation she was sitting up, and a week later left the hospital, having had no return of the bleeding.

The above cases illustrate a mode of treatment very frequently resorted to in this hospital,—*i.e.*, curetting the interior of the uterus in order to check uterine hemorrhage. In many cases, especially where the hemorrhage is an accompaniment of fungous endometritis, the cavity is mopped out with liq. ferri subsulphatis or with fuming nitric acid, preference being generally given to the latter. The after-treatment of endometritic cases consists generally of applications of silver nitrate in solutions of gradually decreasing strength, beginning with one to eight, and good food and tonics: iron, quinine, and strychnine.

THERAPEUTIC BREVITIES.

Many of the patients applying for relief at the out-door department of the hospital complain of vesical irritability, frequency

of micturition, with burning pain at the meatus and much straining. In a large proportion of these cases the urine is alkaline and frequently cloudy. These symptoms are usually quickly relieved by the following combination:

℞ Acidi benzoici, ʒj;
Sodii biboratis, ʒjss;
Aquæ, fʒvj. M.

S.—Tablespoonful every three to four hours.

If the trouble does not yield to this medicine, Dover's powder in three-grain doses every two to three hours is frequently found effective.

As a tonic in the anæmic condition so often attendant upon the pelvic troubles of women, the following pill is given:

℞ Quininæ sulphat., gr. xlviij;
Ferri sulphat. exsic., gr. xxiv;
Strychninæ sulphat., gr. i. M.

Ft. pil. xxiv.

S.—One after each meal.

The operations for lacerated cervix are generally done in the hospital without an anæsthetic. A catgut loop is passed around the cervix and drawn tight by means of a wire-écraseur frame. This not only renders the operation a practically bloodless one, but the strangulation of the tissues obtunds the sensibility, and the denudation can be completed and needles passed without causing more than a slight degree of pain.

TRANSLATIONS.

SOME OBSERVATIONS ON URTICARIA OCCURRING IN INFANCY.*—Prof. Bouchard, in his researches upon dilatation of the stomach, has observed that a certain number of these patients are subject to more or less annoying outbreaks of urticaria. It is not at all surprising that a disease which has for its principal and immediate consequence faulty elaboration of the ingesta should awaken cutaneous manifestations like urticaria, when we see temporary digestive disorder (*embarras gastrique* and indigestion) accompanied by the same eruptions. This urticaria due to lesions or functional disorders of the stomach (like those which supervene after tapping hydatid cysts) is very probably a toxic urticaria due to the fact that the skin serves as a route of elimination to the poison elaborated in the digestive passages and taken up into the circulation. This, at least, is the rational explanation which M. Bouchard gave to this phenomenon in a paper recently read before the Faculty of Medicine.

Dr. Comby tried, in a certain measure, to apply to the infants coming under his observation the results which were obtained from adults by Prof. Bouchard. The dilatation of the stomach, encountered so often among the latter, Dr. Comby had found with almost equal frequency among infants of the poorer classes, subjected from birth to defective alimentation. Among animals, also, he had found, as a consequence of dilatation of the stomach, multiple disorders in many of the organs and tissues.

The diverse eruptions grouped by authors under the name of "*gourmes*" (porrigo, scald-head, etc.—TR.) appear with extreme frequency in little patients with dilatation of the stomach; but, of all these eruptions, that which had struck him most by its objective and subjective characters is urticaria, of which he reports five cases. Two of these have been previously published in a memoir upon "Dilatation of the Stomach," the last three are new.

Case I. Boy of Three and a Half Years; Artificial Feeding; Rachitis; Chronic Urticaria; Dilatation of the Stomach.—A pale, thin child, sufficiently large for his age; nursed by his mother, but was not able to walk until fifteen months old; at the age of six months he took solid food; he often had attacks of vomiting, and had green and offensive-smelling stools. The abdomen had always been large; it presented along the linea alba the projection so often found in rachitis. It was easy to demonstrate the dilatation of the stomach; the churning or splashing extended to the level of the umbilicus. The infant drank a good deal. The mother brought the child on account of an extremely obstinate skin-eruption, extending over the entire body and reappearing at intervals since the age of six months,—that is to say, from the moment when the infant commenced to swallow other food besides the milk. These attacks of urticaria had been accompanied by much itching, which lasted several days, and which returned in

* Communication read before the Clinical Society of Paris by Dr. J. Comby. Translated from *La France Médicale* of August 25, 1885.

a severe form in spite of all the treatment employed. At certain times and seasons the eruption was more or less marked. Upon admission, his entire body was covered with urticarial wheals and lesions caused by scratching. It seemed perfectly legitimate to attribute this urticaria to the dilatation of the stomach, and it was hoped that treatment of the dilatation would act favorably upon the cutaneous manifestation. In fact, under the influence of dieting, and principally the suppression of the excess of liquid which the infant had been allowed to swallow, the chronic urticaria of three years' standing was completely cured.

Case II.—Girl of 19 months; improper feeding; chronic urticaria; dilatation of the stomach.

Case III.—Girl of 3 years; bottle-fed; rachitic; dilatation of the stomach; urticaria.

Case IV.—A child 25 months of age; bottle-fed; dilatation of the stomach; urticaria.

Case V.—A girl of 2 years; improper feeding; rachitis; dilatation of the stomach and urticaria.

[In these cases generally the symptoms resembled so closely those of the first case, and the results of treatment were so nearly identical, that they need not be given in detail.—Tr.]

The above cases belong to early childhood, from nineteen months to three years and a half. All of them, before the outbreak of urticaria, had presented grave and prolonged digestive troubles, which led naturally to dilatation of the stomach and rachitis. The first two were affected with the chronic form of urticaria, the most chronic and rebellious to treatment. The last three were cases of acute or subacute urticaria, coming within the class of what authors have described as "urticarial fever."

It is evident that the incessant and obstinate attacks of urticaria were in relation with the digestive disorders which the infants presented, and that the dilatation of the stomach was concerned in their causation. They were not the kind of urticaria which Bazin called pathogenetic, because this is provoked by the ingestion of certain articles, such as mussels, shellfish, lobsters, spoilt fish, etc. Besides, the little patients had not been subjected to an alimentation which could explain the urticaria; only the imperfect elaboration of food consequent upon dilatation of the stomach could be assigned as the cause. Treatment without attention to the disordered digestion will be unsuccessful for such cases; baths and topical agents will be used in vain; but, on the contrary, if we treat the dilatation of the stomach by dry regimen, the cure of the urticaria follows.

When attacks of urticaria occur in children, we should at once seek for disorder in the digestive tract, and in particular the stomach. Possibly dilatation of the stomach may also be found. For, among infants even more than among adults, the skin is reactive to the disturbances or functional disorders of the digestive tube. Under the influence of repeated attacks of indigestion, we see the bodies of young infants covered with eruptions, as if the cutaneous surface served as emunctories for the toxic matters elaborated in the digestive tract. These eruptions, weeping and covered with scales, will be replaced later by dry papules, by eczemas, or by attacks of urticaria. The cause of the cutaneous manifestations is always the same; the form alone is modified.

Dangers of Antithermic Remedies.—In a recent therapeutical conference, Dr. Dujardin-Beaumetz discusses resorcine, kairine, thalline, and antipyrine, and advises caution in their use, of the first three agents especially, from their active toxic effects. After referring to the eminently antiputrefying and antifermentive properties of resorcine, he states that he had used it in pyrexia without obvious effects, probably on account of the smallness of the dose. He finally abandoned it altogether in the treatment of rheumatism and typhoid fever, not so much on account of its want of power as because he observed toxic symptoms. Resorcine is not only an irritant, it is also a toxic agent; and in his experiments upon dogs it was determined that a dose of thirty centigrammes per kilo of weight of the animal produced convulsive phenomena, and death was caused when the proportionate dose was increased to ninety centigrammes. After death, visceral congestions were discovered, and especially very intense pulmonary engorgement, as in animals poisoned by carbolic acid. Man is even more susceptible to the effects of

resorcine than dogs. Munel reports a case in which a single dose of three and a half grammes (fifty-three grains) rapidly induced a condition of great gravity, which, however, was finally overcome.

Dr. Beaumetz says, "While recognizing resorcine as less toxic than phenic acid, I conclude that it is a dangerous antithermic agent, for I found in my typhoid patients treated with resorcine the same depression of forces, the same adynamia, the same pulmonary congestion, which I had found in those to whom I had administered phenic acid. I have therefore abandoned this medication, and I believe that, even in Germany, resorcine is not much employed internally, but it remains, on the contrary, a very valuable remedy for external use in the treatment of unhealthy wounds."

Kairine is an antithermic acting by diminishing the respiratory power of the blood and destroying hæmoglobin. The recent researches of Brouardel and Paul Loye confirm this view, and show that thalline and kairine exert the same destructive effect upon hæmoglobin. Moreover, contrary to the usual action of antithermic agents, kairine and thalline have no influence whatever upon fermentations. "Kairine should therefore be rejected from therapeutics; it is a dangerous drug, since it only produces antithermic effects by destroying the hæmoglobin and profoundly altering the blood, circumstances which should be avoided in the infectious febrile diseases."

Antipyrine is less toxic than either resorcine or carbolic acid. While it takes a gramme of resorcine per kilo to kill a rabbit, it takes 1.60 gramme per kilogramme of antipyrine. The toxic effect, moreover, is almost the same; it produces tetanic and paralytic symptoms analogous to those caused by strychnine-poisoning. It cannot be doubted, therefore, that antipyrine acts upon the cerebro-spinal axis, and it is probable that it lowers the temperature by modifying the nervous heat-centres. Contrary to kairine, antipyrine does not appear to change the liquor sanguinis, and particularly the hæmoglobin. It has also hæmostatic properties which Henoch declares superior to those of ergotine and of chloride of iron. (This is worth bearing in mind in treating hæmoptysis.) Antipyrine diminishes the urinary secretion, but increases the action of the glands of the skin, which renders it inconvenient to use it in cases of tuberculosis. Like the phenols and oxyphenols, antipyrine is an antiferment. The study of recent antithermics shows that the effects of these new agents vary with the nature of the fever: a temperature of 104° in a phthisical patient will be lowered by fifty centigrammes of antipyrine, while in a typhoid case it might be without effect. —*Bull. de Thérapeutique*, August 30.

Hypertrophic Rhinitis.—In his Thèse de Bordeaux (1885), Dr. Fontanilles discusses the treatment of rhinitis hypertrophica, which he defined as consisting in a swelling, general or local, of the nasal mucous membrane. The general causes are scrofula, syphilis, herpetism, chronic coryza, and acute coryza. The local causes are of special importance in the pathogeny. At their head he places an immoderate size of the openings of the nares, which admit large currents of air bearing irritating solid particles, which increase proportionately with the force of the current. The absence of hairs, the use of snuff, and the use of cold nasal injections too frequently, he names among the causes of hypertrophic rhinitis.

The functional symptoms are those of nasal stenosis. The progress of the disease is slow, and, according to certain authors, it is only an intermediate step towards atrophic coryza. It may be complicated with disturbances of olfaction, loss of smell, and difficult breathing. Hearing and sight may be affected, and there may be reflex disorders.

The diagnosis should be made between this condition and tumors of the nasal cavities, rhinoliths, foreign bodies, adenoid vegetations, and especially polypi.

The treatment is both constitutional and local; the first is directed to the diathesis, and the second consists in cauterizing the mucous membrane with galvano-cautery or chromic acid: he suggests that the preliminary application of cocaine may be useful.

From a study of several cases at the clinic of Dr. Moure, the author concludes as follows:

1. Hypertrophic rhinitis is not merely a symptom, but a morbid entity perfectly determined.

2. It must not be confounded with chronic coryza, naso-pharyngeal polypi, or adenoid vegetations.

3. The complications, sometimes serious, merit particular attention.

4. Its treatment, always successful, consists in the application of the galvanic cautery or crystallized chromic acid.—*Revue mensuelle de Laryngologie, d' Otologie et de Rhinologie*, No. 9.

Local Venous Circulation of the Fingers.—By following a new method of injection, in which the fluid is thrown into the veins towards the extremities, Bourceret has succeeded in demonstrating most beautifully the venous radicles and their relations to the capillaries and arterioles, in the hands and feet especially. Following the process of Bourceret (of placing the member in warm water, after a preliminary colorless injection into the main artery to distend the vessels), the large venous trunk is then opened and a canula inserted, then, in both vein and artery simultaneously, two injecting-fluids differently colored are forced until the smallest vessels are filled. The subsequent dissection reveals the delicate ramifications and final distribution of arteries and veins in a striking manner. The capillaries of the pulp of the finger display a remarkable arrangement. An arteriole of relatively large size may be seen to become suddenly broken up into a plexus of capillaries and form glomerules, which proceed to form venules. These glomeruli are seen principally upon the palmar aspect of the last phalanx, under the anterior two-thirds of the nail and on the thenar and hypothenar eminences.

At all these points, besides this special (tactile) circulation, could be seen the usual circulation of nutrition, of which the vessels presented the usual type. The veins of the fingers rise for the most part from the last phalanx. Then radicles unite almost immediately to form trunks of relatively large size. From thence they proceed longitudinally along the back of the finger, forming a subcutaneous vascular layer without forming irregular plexuses, but with frequent anastomoses.

In fact, there exists at the points named a special functional circulation, distinct from the circulation of nutrition, characterized essentially by the large calibre of the vessels out of proportion to the nutrition. According to M. Bourceret, this special circulation has for its object the giving of aid to the circulation of nutrition and of keeping the parts warm. It may also have something to do with the exquisite sensibility of these regions.—*Le Progrès Médical*, No. 35.

Pathology of Tetanus.—Dr. Arrigo Maroni ("Un Caso di Tetania," Milan, 1885, and *Le Progrès Médical*), having observed mydriasis and inertia of the pupils in a case of tetanus coincident with the access of spasm of the muscular system, and occurring independently of any alteration of the tissues of the eye, as well as from certain physiological reasons, has been led to entertain new views with regard to the pathology of tetanus. Without going into the details of this interesting communication, the conclusions are as follows:

1. The site (and the central organ) of the neurosis in question is found in the gray substance of the spinal cord, and more particularly in the cilio-spinal zone, without excluding, however, the medulla oblongata.

2. A periodical morbid stimulus developing itself in this gray matter, and exalting the physiological activity of different groups of cells therein contained, will provoke, by predominant excitation of the motor groups, paroxysmic muscular contractures; by excitation of the sympathetic centres, spasmodic mydriasis; and, affecting to a certain point the sensory tract, it will provoke divers disorders of sensibility, local or general, preceding or accompanying the access.

3. The cause of the morbid stimulus probably resides in the variation of blood-pressure within the spinal cord due to a reflex action upon the vaso-motor nerves in consequence of an irritation affecting the peripheral branches of the sympathetic or of the sensory nerves.—*Le Progrès Médical*, No. 32.

Erysipelas.—In a communication read before the Académie de Médecine, MM. Trélat and Verneuil insist upon the importance of antiseptic treatment, and urge the isolation of cases occurring in hospitals. M. Cornil said that the difference in gravity between medical and surgical erysipelas is due to the fact that in the former the bacterium of erysipelas exists alone, while in the latter it is combined with the micro-organisms of pyæmia, and that in the latter class of cases it occurs in patients already weakened by previous sickness or traumatism.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 3, 1885.

EDITORIAL.

THE NEW VOLUME.

THE *Philadelphia Medical Times* enters upon its sixteenth year of publication with a larger number of subscribers and readers than at any previous time in its history, thus demonstrating very satisfactorily that its course meets the approval of the profession.

During the current year it is the intention to continue the special features which have hitherto given value and interest to its pages. Original communications, reports of rare and interesting cases, notes of successful treatment, and especially hygienic and sanitary reports, will always receive early attention, and if possessing general interest will be published as early as possible. Authors of papers written for this journal will receive reprints of their articles, if desired, or an equivalent in money at the time of publication; and we invite our readers to communicate such facts or observations as they think interesting and useful, and capable of contributing to the progress of our art.

In deference to the suggestion embodied in several communications, it has been decided to retain the title of *Philadelphia Medical Times*, chiefly in order to prevent confusion with journals of the same name in other cities, and to retain credit for abstracts taken from our pages, although in view of the scientific and non-sectional standing of the *Times* it would be preferable to drop the portion of its title which might be construed as implying that its interests are local or limited.

The thanks of the editor are heartily tendered to the contributors, correspondents, and collaborators who have so faithfully performed their work in the volume just completed, as well as to those who have promised to continue their valuable assistance for the coming year.

RECENT EXPERIMENTS REGARDING THE EFFECTS OF TEMPERATURE UPON THE FILTRATION OF ALBUMEN.

THE physical conditions controlling the rapidity of filtration and affecting the relative quantity and character of solutions of albumen passing through animal membranes have been recently investigated by several observers. Although the question is still too recent to warrant drawing formal and final conclusions, yet results have been obtained of considerable interest in their relation to physiological and pathological problems now engaging professional attention.

Dr. Adolph Loewy* has reported the results of a number of experiments instituted with the special object of determining the influence of temperature upon the filtration of albuminous solutions through animal membranes. The results obtained by him have special significance in their bearing upon the appearance of transitory albuminuria during pyrexial states, and the occurrence of exudations and serous effusions. W. Schmidt had previously published (in *Poggendorf's Annalen*, Bd. 99, p. 350) the reports of a series of experiments upon the quantity and character of the filtrate as affected by pressure, concentration, combination, and temperature of the original solution. Although aqueous solutions of salts were employed, as a rule, he subsequently reported a few observations upon filtration of gummy and albuminous solutions also (*idem*, Bd. 114). Runeberg has more recently communicated the results of

* Ueber den Einfluss der Temperatur auf die Filtration von Eiweisslösungen durch thierische Membranen.—*Zeitschrift für Physiologische Chemie*, vol. ix. Heft 6, Strassburg, 1885. A bibliography of the brief literature of the subject is appended to Dr. Loewy's paper.

experiments instituted to determine the influence of different conditions upon the rate of filtration. The temperature, however, has been a factor which hitherto has not had the attention given to it which its intrinsic importance deserved. Some observers had only noted it in an endeavor to secure a uniform condition for their experiment, others appeared to have overlooked it entirely. At the suggestion of Prof. Senator, Dr. Loewy undertook to investigate this point, and, by making use of an ingenious filtering apparatus designed for the purpose by Dr. Herter, was able to get results which to a certain extent contravene those of Schmidt and Runeberg, whose methods are criticised in the communication referred to, and a course of experiments detailed, the conclusions deduced being as follows:

1. The quantity of the filtrate increased with the temperature. The higher the degree of temperature, the more the filtrate.

2. The residue (after heating the filtrate to dryness in a water-bath), in its *absolute* quantity, was also increased by the high temperature; and here also the rule is, the greater the temperature the more the increase.

In the greater number of cases, the *relative* quantity in high temperature was also proportionately large.

3. The absolute amount of the organic constituents of the filtrate shows a greater or less increase, corresponding with a greater or less degree of temperature. The percentage or *relative* value is, in high temperature, likewise increased in the greater number of cases.

4. The inorganic constituents, as the temperature is raised, appear in greater quantity in the filtrate. However, the increase of temperature had less influence upon them than upon the organic, since their relative quantity was reduced in the greater number of cases.

These experiments may possibly throw some light upon the difference in the relative proportion of albumen existing in transudations and exudations,—the greater amount of albumen in the latter during the fever-process being connected with the more easy filtration of the albumen in higher temperature. Although under normal conditions the urine is almost entirely free from albumen when first secreted, yet there are numerous pathological conditions attended by an increase of albuminuria. In explanation of those in which fever occurs these experiments find direct application, although other factors doubtless enter into the pathological problem besides the merely physical ones of heat and pressure.

COMPULSORY VACCINATION IN CANADA.

IT is with apprehension and regret that we receive the intelligence of the riots in progress in Montreal against the enforcement of the Compulsory Vaccination Act, which went into operation September 28: apprehension, because the existence of an epidemic of smallpox on our border makes us deeply concerned in the efficiency and promptness of the methods used to control it; and regret, because it is a serious matter for a community to require to be forced to do that which its physicians believe to be necessary for the public health. While it is universally admitted that a man in becoming a member of a community is obliged to submit to some restrictions, it is by no means uniformly settled by law or custom just how much of his personal liberty he thereby does surrender. It is hoped that the time will eventually arrive when all men will do what they ought to do of their own volition, but until the dawn of the millennium the problem of enforcing right by might will continue to puzzle the physician, the moralist, and the statesman. It is expedient and necessary that all should submit in the emergency of an epidemic to extraordinary measures for the preservation

of public health, and vaccination affords protection from smallpox at such slight sacrifice of physical comfort that every one when required should, by personal example and influence, endeavor to have it universally performed.

In the presence of an epidemic the municipal and State authorities might at once order the vaccination of all the attendants and inmates of State institutions, hospitals, asylums, and prisons; of children in the public schools; of all immigrants, as well as vagrants or criminals arrested upon the streets, and also all who apply for the operation. Houses in which smallpox prevails should be isolated, and no one allowed to go in or come out without complying with the requirements of the Health Board. But when we come to the compulsory vaccination of healthy families in the absence of disease in the household, the terms of the problem are slightly altered, and this question is one that should engage the serious and careful consideration of both legislator and physician. The medical profession, in this case, is a friend both of the court and of the claimant, and in this position can do much towards creating a healthy public sentiment upon sanitary measures, and thus aiding the enforcement of measures required for the public health. In a free country ignorance is better taught, than fought.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

I HAD hoped to be able to give some account of the discussion on glycosuria at Cardiff in this letter, but have been disappointed by the non-publication of the details: it must, therefore, stand over till a future letter.

The next most important medical matter of the present time is Dr. Goodhart's Bradshawe Lecture at the Royal College of Physicians, on "Morbid Arterial Tension." This should have been delivered by the late Dr. Mahomed, whose work in connection with the subject is so well and so widely known. Some account of him and his labors was given in a recent letter.

Dr. Goodhart, who is Senior Assistant Physician and Lecturer on Pathology at Guy's Hospital, commenced with a fitting tribute to the departed man in whose stead he stood. After this he plunged into the subject, with which he manifested great familiarity. He commenced with the late Dr. Bright; but it is known that, long anterior to his day, Dr. James, of Exeter, had observed that there was a tight pulse without hypertrophied left ventricle—without any valvular disease—in certain cases; and this he attributed to some impurity in the blood which impeded its outflow through the small vessels. Dr. Bright found coexistent kidney-disease, and regarded the impurity in the blood as nitrogenized waste,—a view now generally entertained. He put it: "Either the altered quality of the blood affords irregular and unwonted stimulus to the organs immediately, or it so affects the minute and capillary circulation as to render greater action necessary to force the blood through distant subdivisions of the vascular system." The subject has been worked out at length by Prof. George Johnson, of King's College, who has written so well on disease of the kidneys. He expounded a stop-cock theory of arteriole contraction, cutting off the supply of impure blood to the tissues.

While this exposition has undoubtedly attracted much attention to the subject, I cannot help feeling that this fanciful explanation has stood in the way of its acceptance by many. Dr. Goodhart holds the balance just and true when he says, "Fully examined, there is not much objection to that way of stating the case; but there is just a touch of fancy in the stop-cock simile, which provokes the criticism that it smacks too much of a purposive volition." He then gave what Dr. Dickinson has said of this view: "The heart and arteries are thus represented as acting in antagonism and hypertrophied by the efforts each makes to get the better of the other."

Dr. Goodhart thinks this not unphysiological, and that Dr. Bright did well to stick to the clinical facts. He pointed out that where resistance is to be overcome, organic muscular fibre develops to meet the occasion, as seen in the intestine when there is a stricture, in the walls of the bladder when it experiences a difficulty in emptying itself; and the same occurs with the heart. "In all these instances we see simple illustrations of a common physiological principle admitted by all." The question, he said, is, "Is the muscular coat of the arterioles thickened in chronic renal disease?" To this he replies, "Not so much by a demonstration of the fact, which is perhaps not so easy as it might at first sight appear; but by an appeal to the entirely *a priori* ground that it must be so." Dr. Johnson always argued that there must be resistance

offered at the arteriole end in order to set up high arterial tension and an hypertrophied left ventricle. He showed the hypertrophied muscular fibre under the microscope previous to as well as in that notable conflict between himself on the one part and Sir William Gull and Dr. Sutton on the other part, before the Medico-Chirurgical Society in 1870.

Dr. Goodhart holds that "appeal to demonstration, and to demonstration only, in the present day is too absolute. No doubt it is, on the whole, the safest ground to tread, but appearances admit often of various interpretations;" while, within such limits as its present use, he believes his argument to be unassailable.

As regards the existence or non-existence of spasm in the arteriole-wall, he raises the question whether the muscular walls of the arterioles do not really help to propel the blood by a vermicular action. If such is the case, then arterio-capillary fibrosis or degeneration of this muscular coat would lead to arrested blood-flow, and so we get an hypertrophied left ventricle, with degenerate walls in the arterioles. This view has been upheld by several men who have worked at the subject. He said, "In withstanding the increased blood-pressure it surely must count for something, if it be but the pygmy to the giant." There can be no question about the clinical fact that there is a linked condition of a tight artery, an hypertrophied left ventricle, an accentuated aortic second sound, and a large flow of urine, the physiological associate of high arterial tension.

He then adduced the analogy of the action of digitalis, which "is said to increase the strength of action of the muscular wall of the heart on the one hand, of the arteries on the other." If Rosenstein is right,—and few will call his statement in question,—"digitalis empties the veins and fills the arteries." Consequently it increases arterial tension. About its direct effect upon the heart, no one who has watched a dilated heart contract under its persistent use until a distinct amount of hypertrophy of the left ventricle is induced can doubt that part of the argument. That it also prevents the rapid outflow of blood from the arterial system is a matter few will call in question who have had much experience of its use. In one of the few cases where its toxic effects were brought out in my experience, the pulse was hard and the action of the heart violent and hammering; indeed, a condition was set up precisely analogous to that of the high arterial tension of Bright's disease.

As to the question of spasm, Dr. Goodhart says, "It is clear that a muscular action which leads to hypertrophy might easily pass into spasm under conditions similar to but in excess of those which have provoked the increased action." We see in angina pectoris vaso-motoria, common with the gouty heart, an instance of a condition of passing spasm implanted upon one of hypertrophy of the two muscular ends of the vascular system. He continues: "Indeed, the assumption of some such spasm, if not necessary, is at any rate agreeable to many of the phenomena of Bright's disease. I may instance the headache and the renal asthma, both of which are sometimes much relieved by nitrite of amyl and nitro-glycerin, drugs which unquestionably relax spasm and promote dilatation of the peripheral vessels."

Having thus discussed Dr. Johnson's views, which find remarkable support in the evidence furnished by the sphygmograph, he turned to the arterio-capillary fibrosis of Gull and Sutton. It is not generally known that Dr. Handfield Jones wrote on this subject considerably anterior to these two later investigators. Their position, according to Dr. Goodhart, is this: "Old age is not an entity, but a set of conditions predisposing to that state which is called chronic Bright's disease." He continues: "And while to most this comes in natural order when the prime of life is over, yet to some old age is no matter of years and averages, but the running down of a spring set for an individual. It comes at times even to children. In the tints of summer—yes, even in those of spring—you can read old age if you will. And although chronic Bright's disease is in many cases associated with renal disorder, it is not essentially a matter of organs; the generalizing change in the tissues of the whole body is the essential, and to some this comes not by kidney chiefly, but by lung chiefly, by brain, by heart, and so on." It is with the greatest possible pleasure I write what Dr. Goodhart has put at once so happily and so pithily.

As long as Bright's disease is a matter of the presence of albumen in the urine, so long will the medical man's mind be like a closed fist, which, as Rufus Lyon justly said, "is shut up from receiving and holding aught precious, though it were heaven-sent manna" ("Felix Holt"). So long as a deceptive error is firmly planted across the path to knowledge, no progress can be made except by those resolute enough to cross the barrier somehow. For the man who emancipates himself from the demoralizing superstition, a broad expanse of knowledge spreads itself out before him; and such good, honest teaching as this of Dr. Goodhart's ought to do much to encourage men to get to the farther side of the barrier, and see in what we call "Bright's disease" something larger, something more extensive and wide-spread, than kidney-mischief solely,—and that is not mere albuminuria. Of course the simplicity of boiling urine in a test-tube recommends itself to many minds as much easier than a thorough acquaintance with a wide-spread and complicated morbid process in its complexity as well as with each individ-

ual detail. He cleverly describes this change as "a magnificent scheme of decay," and says of it, "The idea is a suggestive one, and it is largely true. Pathology is distinctly the richer for it, but it derives its strength less from the labors of the histologist than from the bird's-eye view, the intuition—may I call it so?—of experience. There is ground in plenty for the argument that we wear out by tissues or systems; there is, I think, a fair amount of evidence admitting the opinion that chronic Bright's disease, with contracted kidney, is a generalized degeneration; but to base it upon the non-existence or unimportance of muscular hypertrophy of the arterioles, and to ascribe the thickening which exists to an essentially hyaline fibroid degeneration, is equivalent to the unskilful selection of a battle-field." Then he proceeds: "How far, then, do I think it is true? Perhaps an answer to that question may best be arrived at by continuing upon the other, How far is it not true? And, going to the other end of the circuit, there are groups of cases which admit no doubt in which the disease in the kidney is certainly the cause of the changes in the heart and arteries." He has collected a number of cases where parenchymatous nephritis was the morbid starting-point, and changes in heart and arterioles followed therefrom. As to how quickly perceptible hypertrophy of the heart can be developed, the change is often more rapid than is assumed. (I remember Prof. Traube, of Berlin, discussing this question in La Charité, Berlin, and giving it as his opinion that perceptible changes may be set up in a few weeks,—five, in one case.)

Dr. Goodhart says, "A large series of observations may possibly throw some light upon the moot point, the rate at which the heart can put on muscle; for the heart has been found large in some cases in which there was every probability of the renal disease having existed but a few weeks." He then discourses of a very practical matter: "Such differences as do exist between the two classes of cases are of more practical moment than of worth as distinctions. For, in the first place, it may be said that the failure of health and of nutrition will not unfrequently combine so to reduce the arterial tension as to deprive the circulatory system of the excuse for hypertrophy. The danger, too, in these cases is much more serious at any one time than the granular kidney can show. The left ventricle has, in consequence, more tendency to dilate, and thus to relieve the excessive tension and forestall the hypertrophy by the death of the patient. I put it thus pointedly as a fact of importance. In proportion as the renal disease is sudden and severe, so is the risk of dilatation of the heart. The more insidious it is, the more likely is the cardiac hypertrophy to be present in greatest perfection. Serious acute renal disease means sudden increase of arterial tension and the imposition of greatly-increased labor of the heart, and rapid dilatation of the wall becomes a serious risk." Bravo, Dr. Goodhart! Concentric hypertrophy of the left ventricle is not the only cardial change, though some seem to think it is.

I have long insisted that the cardiac change will be a blend of hypertrophy and dilatation, according to the rapidity of the demand upon the heart and the nutritive powers of the system. In "Gout in its Protean Aspects," page 49, is written, "When the nutrition of the tissues is defective, then, instead of hypertrophy, dilatation is the consequence of a high blood-pressure in the arterial system." There is another misleading superstition scotched, if not slain. In a recent letter I gave some details of a case where a heart fairly hypertrophied yielded after two severe attacks of angina pectoris vaso-motoria, and a condition of dilatation was set up in a very short time. In speaking of the relation of this condition of high arterial tension to atrophy, Dr. Goodhart says, "It is obvious that dilatation of the heart is unfavorable to the occurrence of apoplexy. It relaxes the tension at the centre which would otherwise be put on at the periphery, and death comes about by cardiac failure, and not by peripheral hemorrhage." Then, in looking at the matter from a clinical stand-point, he continues: "It is worth remembering, for it cannot be unimportant whether the risks of an individual are those of apoplexy or of the more gradual process of cardiac failure; and the undoubted value of a drug such as digitalis in many of these cases is a ready criterion of the importance of the point in the matter of treatment." Right again, Dr. Goodhart. In the one case you materially increase the danger of the large heart bursting an artery, in the other you strengthen a failing heart.

Then the lecturer proceeded to discuss the hyaline fibroid changes found with the large left ventricle. The gist of what he said, and said well and convincingly, is as follows: Where a tendency to tissue-growth is set up in a complex tissue like an arteriole-wall, "the least specialized or less dainty feeders are likely to have the best of it and to supplant the more highly specialized. . . . Therefore I see no contradiction in the fact that in the tissues and vessels of chronic renal disease the muscle may be thick in some parts, wasted in others, or that the vessels can be recognized as well by the hyaline fibroid thickening of the coats as by the muscle." When we remember that overstrain or high arterial tension is the exciting cause of atheroma, it is not difficult to conceive of change in other tissues than the muscular. "Hence, as the direct outcome of the overwork, we might expect more or less excessive nucleation of the coats of the arterioles, and ultimate fibrosis." This point is insisted upon by Dr. Dickinson.

As to the production of cardio-vascular changes in renal disease, he said, "It is only in cases where the excretory area is disproportionately small for the body-weight that the effect must be sought. If the body waste and the heart fail, the kidney may be small indeed, yet sufficient for its day,—just as the chronic phthisic could not possibly have lived on had not the progressive wasting compensated the balance. It is also true that the general changes may be extreme, and the kidneys but a little granular or coarse."

What Dr. Goodhart has to say upon albuminuria as connected with Bright's disease is short, and to many no doubt eminently unsatisfactory. Indeed, it is difficult to discern what is his real attitude upon the matter. It is instructive, in the present state of medical feeling on the subject, that he devotes so little space to the subject, and what little is said is put cautiously. "I suppose that ever since Bright's time it has been felt by all that albuminuria must often be but a rough and a late test of disease, and that there are conditions preceding it which, if we could recognize them, would tell us more."

Then he went into the subject of the sphygmograph and its revelations. It "told us, in one sense, what we knew before, but it told its tale with a graphic interest which had much the merit of a new discovery." What it tells is of increased arterial tension, and supports "the hypothesis advanced and supported by Dr. Walshe as early as 1849, that Bright's disease is not renal, but primarily a blood-disease." He next pointed out the frequency of dilatation of the pulmonary artery in cases of prolonged high arterial tension. In conclusion, it may be said of Dr. Goodhart's lecture that it was in every way worthy of the occasion, and a demonstration that the school of which Bright and Addison were but recent factors, despite dark days, is still vital and active, and holding its place in the van of medical progress. No doubt the lecture will soon appear in pamphlet-form, in which many will be glad to renew their acquaintance with it.

J. Milner Fothergill.

BALTIMORE.

Baltimore, September 14, 1885.

For the past seven years the Medical and Chirurgical Faculty of Maryland has had its meeting-rooms and library in a building part of which was used as a patent-medicine factory. Members on going to the rooms would see directly in the entrance-way a sign one could not help noticing, setting forth in large and conspicuous letters the virtues of "New Life," an unfailing cure for consumption and all lung-diseases. This has been a source of much complaint among the members; but it is only recently that steps have been taken to remove the library to more commodious and respectable quarters in the Athenæum Building, corner of St. Paul and Saratoga Streets. The new rooms were formerly occupied by the Mercantile Library. In the same building are the valuable library and art collection of the Maryland Historical Society. The library of the Faculty is constantly increasing in size and value, and the large number of current journals upon the tables makes it one of the best working medical libraries in the country. Unfortunately, the Faculty has no permanent home, but is at the mercy of landlords. Some years ago a beginning was made to raise a fund for a medical building, but only a small sum was collected, and the enthusiasm of a few who started it seems to have entirely fizzled out.

The preliminary lectures of the winter session begin to-day at the medical colleges here. The prospects for large classes are favorable.

The Baltimore Medical College, one of the younger institutions, has put on a spurt. A hospital was secured last winter, and a handsome new college-building has just been completed. The majority of the members of the present faculty are young and energetic, and promise to deserve success.

Owing to impaired health, Prof. Richard McSherry will be unable to deliver his course of lectures on the Principles and Practice of Medicine in the University of Maryland this winter. His place will be filled by Prof. Chew, and the course on Materia Medica and Therapeutics will be given by Prof. I. E. Atkinson.

It is rumored that Prof. Matthew Hay, of Edinburgh, has been elected Professor of Pharmacology in the Johns Hopkins University. By this appointment five of the chairs in the future medical department of this university have been filled. These are Physiology, Chemistry, Pathology, Hygiene, and Pharmacology. The incumbents of the four first-named are, in order: Dr. H. Newell Martin, University Professor of Biology; Dr. Ira Remsen, University Professor of Chemistry; Dr. William H. Welch, formerly Pathologist to Bellevue Hospital, New York; and Dr. John S. Billings, U.S.A., who will lecture on public hygiene.

Dr. George M. Sternberg, U.S.A., has been ordered by the State Department to return to Rome as the delegate from this country to the International Sanitary Conference, which reconvenes in November. Dr. Sternberg has just been elected an honorary member of the Royal Academy of Medicine in Rome.

G. H. R.

Agaricine, in doses of one-sixth of a grain, to be repeated if necessary, is an efficient remedy for excessive perspiration, and there appear to be no disagreeable or undesirable effects attendant upon its use.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN GYNÆCOLOGICAL SOCIETY.

THE Tenth Annual Session was held in Columbian University, Washington, D.C., September 22, 23, and 24, 1885.

TUESDAY, FIRST DAY—MORNING SESSION.

The meeting was called to order by the President, Dr. William T. Howard, of Baltimore.

Dr. Samuel C. Busey delivered the address of welcome to the Association as the guests of the Washington Obstetrical and Gynæcological Society.

The first paper, by Dr. Samuel C. Busey, of Washington, was entitled

THE NATURAL HYGIENE OF THE CHILD-BEARING LIFE.

Although pregnancy is to be regarded as a physiological process, yet Dr. Busey regards it as one which terminates with more or less injury to both mother and child; it is impossible to define the border-line of health and to say where the physiological ends and the pathological begins. The age of greatest safety coincides with the age of greatest fecundity; beyond and below this period the mortality increases with the difference in age. The fifth quinquiniad is the period during which the laws of fecundity, nubility, and survival find their natural complement in relatively the highest perfection. Precocious maternity is to be deprecated, but in this country and in the higher walks of life precocious matrimony seems on the increase. To this evil he desired to direct general attention.

The discussion was participated in by Drs. Chadwick and Reynolds.

Dr. Henry J. Garrigues, of New York, read a paper on

PUERPERAL DIPHTHERIA.

The speaker had met with twenty-nine cases of this affection. It is one of the different diseases included under the term puerperal fever, and is characterized by diphtheritic infiltration somewhere in the genital canal of the puerperal woman. The situations in which the vagina narrows, and the posterior wall of the vagina, are the parts most commonly affected. Five of the twenty-nine cases died, and in all of these the autopsy showed the uterus much larger than it should be. Its walls were thickened and softened, sometimes almost diffluent. In some cases the muscular tissue has been scooped out, as is seen in dissecting metritis. Anything that weakens the patient, as well as injuries to the genital tract, predisposes to the affection. The cause of the disease is, however, infection from the outside, and this infection appears to be carried from one patient to another by the air of the ward.

The first symptom is usually the occurrence of fever two or three days after delivery. There are at times chills or chilly feelings. The temperature, as a rule, varies three or four degrees from the normal. Examination shows the uterus larger than it should be, and quite tender. The lochial discharge is often scanty. The diphtheritic patch makes its appearance from three to seven days after delivery.

The diagnosis is not difficult. The affection is to be distinguished from the grayish discoloration of abraded surfaces following the use of corrosive sublimate, and the sloughs produced by the application of chloride of zinc in the treatment of this disease.

The prognosis is doubtful. Five out of twenty-nine cases died, giving a mortality of 17.2 per cent. When the diphtheritic process is checked, recovery is usually rapid. The duration of the disease, when it ends in recovery, averages two weeks.

To prevent the development of the disease, the vaginal examinations during labor should be as few as possible. Neither the finger nor the hand should be introduced into the uterus unless it is absolutely necessary. Wounds of the genital organs should be avoided, and instruments should be used with care. The most important element is, however, antisepsis with bichloride of mercury. Everything that comes in contact with the genital organs should be disinfected with a one- to two-thousandth solution of corrosive sublimate. Since he had adopted this method, the speaker had seen but one case, and that was where a resident physician had delivered a woman immediately after removing a macerated fœtus from another patient.

The plan of treatment which had given the most satisfaction had been applications of a solution of equal parts of chloride of zinc and distilled water, applied to the diphtheritic patches; and, as the application is painful, an anæsthetic may be used. Where the uterus is involved, warm intra-uterine injections of corrosive sublimate solution (1 to 2000) are employed; and, following this, a suppository of fifteen grains of iodoform is introduced. The intra-uterine injection needs to be repeated only once in the twenty-four hours, but the vagina should be douched with the same solution every three hours. If after twenty-four hours the diphtheritic process is not arrested, the application of chloride of zinc is to be repeated. If the disease be limited to the vagina and vulva, the intra-uterine treatment is to be omitted. Such remedies as are indicated by the general symptoms are given internally.

The speaker then exhibited the occlusion-bandage which he uses after labor. This consists of a pad of absorbent cotton, to be placed against the vulva; over this he places a piece of waxed muslin or rubber-cloth, and

outside a pad of cotton. The whole dressing is treated with the bichloride of mercury solution and secured to the binder by means of a strip of muslin or cotton flannel. The doctor then referred to the great decrease in mortality following the introduction of this treatment. Previous to its adoption, the death-rate had been nearly seven per cent. It was now less than three-fourths of one per cent.

Dr. W. T. Lusk, of New York, and Dr. W. L. Richardson, of Boston, had used the method of Dr. Garrigues with success.

Dr. John Byrne, of Brooklyn, described an interesting case in which vaginal deformity by cicatricial tissue followed puerperal diphtheria.

FOUR CASES OF OÖPHORECTOMY, WITH REMARKS.

This was the title of a paper by Dr. Joseph Taber Johnson, of Washington.

The first case was that of a woman, aged 29, who for fourteen years had suffered with chronic oöphoritis and menstrual epilepsy. After the failure of all other treatment, both ovaries and one Fallopian tube were removed. The patient made a good recovery, and for several months had no periods and no spasms. Gradually the menses returned, and with them the spasms to a slight degree.

The second case was that of an unmarried woman, aged 21. For five years she had chronic inflammation of the ovaries following suppression of the menses from cold. The ovaries and tubes were removed, and the patient is now well.

The third case had been a great sufferer with dysmenorrhœa and reflex symptoms. After four months' treatment, oöphorectomy was performed, and the patient recovered and continues well.

The fourth case was a married woman, aged 40, the mother of several children. She had complained of a pain in the left ovary for twenty years. She was practically bedridden for three weeks out of every four. She insisted on an operation, although she was advised to postpone it for a few years longer until the occurrence of the menopause. The ovaries and tubes were removed. She did well for three days, but vomiting then appeared, and she died on the sixth day.

DISCUSSION.

Dr. R. S. Sutton, of Pittsburg, advocated the performance of an exploratory operation in these cases where the seat of the disorder appears to be the ovaries or tubes, even when the disease of these organs cannot be demonstrated.

Dr. W. H. Baker, of Boston, thought that there was danger of this operation being performed too often. An operation which gives such brilliant results in properly-selected cases, is apt to be abused. If in an exploratory operation the ovaries and tubes are found to be healthy, so far as their gross appearances are concerned, they should not be disturbed.

Dr. T. A. Emmet protested against the too frequent performance of the operation. There are some cases in which it is indicated, but these are rare. He thought that it should never be done for dysmenorrhœa, which he considers a neuralgic condition dependent upon anæmia. Where dysmenorrhœa is relieved by the operation he believed it to be attributable to improvement in general nutrition rather than to the mere removal of the ovaries.

The paper was further discussed by Drs. Lusk, Reamy, Jenks, and Mann.

WEDNESDAY—SECOND DAY.

The first paper, the President's address, on

TWO RARE CASES IN ABDOMINAL SURGERY,

was read by Dr. William T. Howard, of Baltimore.

The first case was as follows. A negress, aged 24, married, presented herself at the Dispensary of the University of Maryland, April 26, 1882. She was the mother of five children, and had never had a miscarriage. Menstruation was normal and regular. The last child was two months old. Shortly after this confinement she observed an enlargement in the lower part of the abdomen. Examination showed well-marked fluctuation all over the abdomen, with distinct resonance around the umbilicus, with dulness and bulging in both flanks. Six weeks later the umbilical resonance had disappeared. Two weeks later she was seen by Dr. Howard for the first time. She was then evidently quite sick, with a temperature of 102°. Physical examination revealed the presence of pleurisy. Crackling râles were found throughout the lungs. The abdomen was of about the size of seven months' pregnancy, and remarkably protruding in the centre. There was complete dulness over the tumor, and resonance in the flanks. The area of dulness was unchanged by variation of position. All the signs of a unilocular cyst were perfect. The uterus was found well in front of the cyst, and the sound entered two and two-thirds inches.

The next question was as to diagnosis. Ovarian cyst was excluded by the infrequency of this affection in the negro and by the rapid development of the tumor. Fibro-cystic tumor of the uterus was excluded by the great rarity of the disease and its extreme rarity before the age of thirty-five years, the rapid growth in the present case, and the absence of menstrual disturbance. Parovarian cysts are usually of slow development, are apt to be flaccid, are comparatively rare, and do not affect the general health. This was therefore excluded. Simple ascites was excluded with-

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out difficulty. Encysted dropsy of the peritoneum was next considered. This, in the early stages, is accompanied with symptoms of constitutional disturbance. The abdomen is not prominent, and often flaccid. This was therefore excluded.

On June 20 the speaker aspirated the abdominal cyst, and removed a light, straw-colored fluid which speedily coagulated. The patient did well for three days, when acute peritonitis appeared, and she died on the seventh day.

At the autopsy a large mass, consisting of the omentum, the transverse colon, and small intestine, bound together by inflammatory exudation, was found. This formed a cavity in which the fluid had collected. The peritoneum was everywhere invaded with miliary tubercles. There was tubercular ulceration in the small intestine. The other abdominal organs were not affected. There was also tubercular pleurisy, and throughout both lungs were scattered gray miliary tubercles. This was then a case of encysted tubercular peritonitis, presenting the character of an ovarian or a parovarian cyst.

Case II.—F. R., aged 24, complained of a heavy weight in the abdomen, which was greatly enlarged. There appeared to be an immense unilocular cyst. This had begun seven years previously, and the increase in size had been gradual and not accompanied with pain. The length of time which it had lasted was against its ovarian origin. The length of time that it had been developing, the marked fluctuation and the flaccidity of the cyst, were in favor of a parovarian cyst; but the fact that the tumor could not be impressed below the umbilicus was against this view. Fibro-cyst of the uterus and encysted peritonitis were excluded. The diagnosis lay between an ovarian and a parovarian cyst.

An exploratory operation was decided upon. The peritoneum was much thickened, and closely adherent to the cyst. A trocar was introduced, and forty pints of fluid escaped. It was impossible to enucleate the sac. The opening in its wall was therefore enlarged, and on looking into its interior it seemed as though all the abdominal organs had been removed, the cyst-wall being stretched tightly across the spinal colum. A drainage-tube was introduced, and the wound closed. The patient died of acute peritonitis. A satisfactory post-mortem was not obtained, so that no further light was thrown on the nature of the case.

DISCUSSION.

Dr. Emmet said that while in the case described yesterday he objected to exploratory operations, yet in these cases of tumor he advocated it, for the woman had something that should be taken away. He had seen a case resembling the second one described in the paper. He was obliged to leave the sac. This was washed out frequently, and in six weeks had greatly diminished in size. Strangulation of the intestine then occurred, and the woman died.

Dr. William Goodell thought that in many of these cases it was very difficult to make the diagnosis even after the removal of the tumor. He favored exploratory incision.

Dr. T. A. Reamy had seen a case of encysted tubercular peritonitis in which the patient died on the second day after the removal of the fluid. He also described cases showing the difficulty of diagnosis.

Dr. W. T. Howard, in closing the discussion, said that in the majority of cases a diagnosis could be made. The cases that he had described were instances of rare affections. They had been cited to facilitate the diagnosis of similar cases.

Dr. T. A. Reamy, of Cincinnati, read a paper on

THE CARE OF THE PERINEUM DURING LABOR.

After referring to the many methods in use for the support of the perineum during labor, he described a method which he had used for several years. When the perineum begins to bulge, the patient is placed across the bed, with the limbs in the lithotomy position and the knees close together. A towel or bandage ten inches wide and a yard and a half long is placed around the buttocks and perineum, with the upper edge of the bandage on a level with the fourchette. The ends of the bandage are given to two assistants, who sit on each side of the patient, or, if the bed is narrow, they take their positions at the head of the patient. They are told to make traction during each pain. The accoucheur sits in front of the patient and sees that the traction is made in the proper direction. Care must be taken that the towel is smoothly applied to the perineum. The forceps may be used with the towel in position. This method is comfortable to the patient, and does not necessitate exposure.

Dr. Chadwick said that he had been in the habit of using the method practised in Vienna, which consists in having the patient on the side, with the accoucheur sitting by her side. He then passes one arm over the thigh, and, interlocking the fingers with those of the other hand, is able to make any desired amount of pressure on the advancing head, thus delaying it until the perineum is thoroughly stretched. He is careful that the head shall not be born during a pain.

Dr. Ellwood Wilson, of Philadelphia, stated that the only plan he employed was to see that the woman kept her mouth open during the last pains.

Drs. Reamy, Wilson, Mann, Johnson, and Reynolds also took part in the discussion.

Dr. Sutton objected to the method referred to by Dr. Chadwick that it had a tendency to

cause premature extension of the head, thus increasing the peril of the perineum.

Dr. Edward W. Jenks, of Detroit, reported

A CASE OF CÆSAREAN OPERATION.

The patient was a well-proportioned woman, 27 years of age, in her second labor. The first labor had not been particularly difficult, and had occurred five years previously. Two years later she had sustained a fracture of the right ilium, which was the cause of difficulty in the second labor. Labor began at three o'clock in the morning, and the physician was called. As there seemed to be some difficulty, he attempted to apply the forceps. One blade was readily gotten in place, but the second could not be introduced, and then the projecting ridge of bone was discovered. A second physician was called, who also failed to apply the forceps. A third was called in consultation, and the forceps were again tried. Craniotomy was then decided upon and performed, but the head could not be brought down.

Dr. Jenks was then telegraphed for, and arrived at the house at 9 P.M. In order to be certain that it was impossible to apply the forceps, he made the attempt, but was unable to introduce the second blade. Neither could the cephalotribe be introduced. It was then decided to perform abdominal section. This was done at 2 A.M., nearly twenty-four hours after the beginning of labor. The woman was, however, in good condition. When the uterus was cut through, the placenta was found attached immediately beneath the cut, and the bleeding was alarming. Delivery was rapidly accomplished and the hemorrhage stopped. The uterine wound was brought together with silk sutures and the abdominal incision closed. The patient reacted well and did nicely until the third day after the operation, when—the nurse leaving the room in disobedience to orders—the patient got out of bed, was seized with a severe pain, and died in the course of twenty-four hours.

DISCUSSION.

Dr. Skene, of Brooklyn, thought that laparo-elytrotomy would have been better suited to this case.

Dr. Jenks said that laparo-elytrotomy had been considered, but the other operation preferred. The patient would probably have recovered if it had not been for the unfortunate accident.

Dr. Ellwood Wilson, of Philadelphia, made some

REMARKS ON THE USE OF TARNIER'S FORCEPS.

At a previous meeting the speaker had presented a number of objections to the Tarnier instrument. Since then he had used the forceps in several cases with advantage, and he wished to correct the statements which had been made on theoretical grounds. A detailed account of nine cases in which the Tarnier forceps had been used with benefit was then given.

He had used the modification of the Tarnier forceps devised by Dr. William T. Howard, of Baltimore.

Dr. Niell, of Baltimore, presented his modification of the Tarnier forceps, which consisted in adapting the Tarnier principle to the Simpson forceps in such a way that the traction bars could readily be detached.

The paper was discussed by Drs. Parvin, Goodell, Mann, Wilson, Howard, and Reamy.

THURSDAY, THIRD DAY.

Dr. R. Stansbury Sutton, of Pittsburg, described

A MODIFICATION OF EMMET'S CERVIX OPERATION, WITH A CASE.

While the operation was original with the speaker, he did not claim to have been the only one who had performed it. In every case of lacerated cervix which has lasted for any length of time, the lips of the cervix are indurated and covered with cicatricial tissue, which greatly interferes with coaptation of the lips in performing the operation. This cicatricial tissue is especially abundant in those cases in which nitrate of silver applications have been employed. The condition may be limited to one lip, or it may affect both.

The case described was operated on in June, 1885. She was 42 years of age, the mother of several children. There was a double laceration of the cervix, and the anterior lip was much hypertrophied and as hard as cartilage: it was convex from side to side as well as from before backward. The posterior lip was denuded in the ordinary manner, with the exception that the median strip of mucous membrane was left wider than usual. The anterior lip was denuded clear across, and all the cicatricial tissue removed. The lips were then united in the ordinary manner. The result had been excellent. A probe could be readily passed, and the patient menstruated without difficulty.

DISCUSSION.

Dr. Goodell had employed this method in some cases. He had also at times outlined the strip of mucous membrane corresponding to one side of the new cervical canal and dissected it from the indurated tissues below, which were then removed. The strip of mucous membrane was then brought in place and the lips treated in the ordinary way. This had given a good result.

Dr. Skene, instead of using the method described by Dr. Sutton, had been in the habit of performing a preliminary operation to get rid of this indurated tissue. This consisted in removing a transverse, wedge-shaped piece from one or both lips as might be required,

and bringing the surfaces together with silk stitches. After the size of the cervix had been reduced, the ordinary operation was performed. This had given good results.

Dr. George J. Engelman, of St. Louis, had in these severely indurated cases paid no attention to the retention of the median strip of mucous membrane, but denuded both surfaces completely across and brought them together. In the position of the future canal he placed one strand of carbolized silk thread. After the removal of the sutures, the passage was dilated with the probe. This operation has been followed by a perfect result so far as union, involution, and the health of the patient are concerned.

Dr. Mann had also employed the method described by Dr. Sutton.

Dr. Baker considered that the retention of the strip of mucous membrane was of importance, and thought that Dr. Emmet's operation could always be done in these cases by adopting the suggestion of Dr. Skene. He, however, preferred to do both operations at one time.

Dr. William Goodell, of Philadelphia, read a paper on

INFLAMMATION OF THE PAROTID GLANDS FOLLOWING OPERATIONS ON THE FEMALE GENITAL ORGANS.

The speaker referred first to the close relation which is known to exist between the salivary glands and the genital organs of the adult.

He had seen the parotid gland suppurate after a posterior incision of the neck of the uterus. He had had parotid bubo once in one hundred and fifty-three ovariotomies. This occurred in a woman with an immense tumor. At the time of operation she was suffering with septic symptoms following tapping of the cyst. She died on the twenty-second day. He had also seen cases in which there was transferrence to the parotid glands, in which there were no symptoms of septic poisoning. He had seen three such cases. Two followed ovariotomy and one followed oöphorectomy. Not one of the three cases ended fatally, and the speaker regarded the affection as sympathetic rather than symptomatic.

DISCUSSION.

Dr. Sutton reported one case in which this complication appeared after ovariotomy. The patient was almost convalescent, when one gland began to swell. In a week the second gland began to swell. The temperature was one or two degrees above normal. There was some diarrhœa, but no tympany and no soreness over the abdomen. A crop of rose-colored spots appeared over the abdomen and arm. During the third week she became much worse and died. He regarded the case as septicæmic, although others considered it a well-marked case of typhoid.

Dr. Johnson had seen swelling of the parotid glands follow in one case of ovariotomy, ending fatally on the sixth day.

Dr. Mann reported three cases: once after ovariotomy with distinct septic symptoms, ending fatally; once in a case of ovariotomy and hysterectomy, ending in recovery; and once after a penetrating wound of the abdomen, ending in recovery.

Dr. Emmet had seen two cases: once after an operation for lacerated cervix, the patient recovering; once after operation on a small vesico-vaginal fistula, ending fatally.

Dr. Baker reported one case of suppuration of the left parotid gland after Tait's operation. The patient recovered.

Dr. Reamy described two cases. One followed Tait's operation: the patient died. The second was after supra-vaginal hysterectomy: the patient recovered.

Dr. James R. Chadwick read a paper entitled

PERISTALSIS OF THE GENITAL TRACT, AND A NEW THEORY TO EXPLAIN RELAXATION OF THE VAGINAL OUTLET DURING LABOR.

[The scope of this paper is indicated by its title: it cannot be presented in abstract so as to do it justice.—Rep.]

The last paper read was by Theophilus Parvin, M.D., of Philadelphia, and was entitled

FACIAL PARALYSIS IN THE INFANT FROM THE USE OF THE OBSTETRIC FORCEPS.

March 15, 1885, the speaker was called to a case of delayed labor. The first stage had lasted twenty-four hours, and the second stage eight hours. The position was a left occipito-anterior. The only cause of difficulty seemed to be the weak contractions of the uterus. The Davis forceps were therefore applied, and the child was delivered. The following day it was noticed that when the child cried the left side of the face was immovable, the skin smooth, and the eye open. There was scarcely a trace of the pressure of the forceps. The paralysis disappeared in ten days without treatment.

This case was made the basis of a full *résumé* of the literature of the subject.

DISCUSSION.

Dr. Skene referred to the importance of diagnosing facial paralysis the result of injury from facial paralysis the result of apoplexy, for this condition is not infrequent in young infants. As a rule, the diagnosis is not difficult; but when, as in a case which he had recently seen, there was paralysis of the facial nerve from pressure of the forceps associated with paralysis of the arm from injury of the shoulder in hurried delivery, there might be some uncertainty. The presence of ecchymosis would tend to clear up the diagnosis.

The paper was further discussed and cases reported by Drs. Ellwood Wilson, William Goodell, and William L. Richardson.

At the business meeting the Nominating Committee presented the names of the officers for the ensuing year, who were elected:

President.—Thaddeus A. Reamy, M.D., of Cincinnati.

Vice-Presidents.—Theophilus Parvin, M.D., of Philadelphia, and George J. Engelman, M.D., of St. Louis.

Secretary.—Joseph Taber Johnson, M.D., of Washington.

Treasurer.—Matthew D. Mann, M.D., of Buffalo.

Members of Council.—F. P. Foster, M.D., J. C. Reeve, M.D., B. B. Browne, M.D., and R. B. Maury, M.D.

The following new members were elected: Dr. J. B. Hunter, New York; Dr. Charles Jewett, Brooklyn; and Dr. W. H. Parish, Philadelphia.

The next meeting will be held in Baltimore, Maryland, September 21, 22, and 23, 1886.

The Society then adjourned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, SEPTEMBER 3, 1885.

The President, B. F. BAER, M.D., in the chair.

DR. B. F. BAER read the following report of a case of

OVARIAN CYSTOMA COMPLICATED WITH PERITONITIS AND PHLEGMASIA ALBA DOLENS—DOUBLE OVARIOTOMY.

Mrs. M., æt. 31, has been a widow nine years. She had one child ten years ago, and had enjoyed good health until about three years before I saw her. At that time she observed that her abdomen was increasing in size. This gradually progressed for eighteen months, when she was large enough to attract the attention of her neighbors. After this the growth remained almost stationary, and did not affect her general health until the latter part of March of the present year, when she was suddenly seized with pain in the left iliac region. The pain was acute and radiating in character, extending principally down the anterior portion of the left thigh. She attributed the attack to an unusual exertion. Although she made an effort to continue her vocation (that of seamstress), she was compelled to give up and send for her physician, my friend Dr. John R. Haney, of Camden.

When Dr. Haney first saw her, her abdomen was very tender over its entire surface, purple from congestion, greatly distended, and tympanitic in its upper but dull in its lower portion. She was suffering great pain, and had constant nausea and vomiting; her skin was hot; pulse 120, and temperature 103°. From the history, symptoms, and physical signs elicited, the doctor diagnosticated ovarian cystoma with supervening peritonitis. He administered quinine per rectum and morphine hypodermically, together with counter-irritation over the abdomen. Within a week the patient appeared to be better, when, through the kindness of Dr. Haney, I first saw her. The tympanitis had disappeared, and the pain was not so severe, but the abdomen was still very tender on pressure, especially in the left iliac and right umbilical regions; her features were drawn and flushed and presented an anxious expression; her tongue was dry and heavily coated; pulse quick, and temperature 102°. She lay quietly in the dorsal position, with her thighs flexed. The abdomen was as large as at full term of gestation, and was projecting. It was dull on percussion everywhere except along the line of the colon and in the epigastrium, and there was evident fluctuation. The uterus was retroverted, not freely mobile, and very tender on pressure on the left side. Above and upon it could be felt the lower border of the circumscribed growth which occupied the abdominal cavity. I fully agreed with Dr. Haney's diagnosis of ovarian cyst complicated by peritonitis. As she seemed to be somewhat better, I advised a continuance of the treatment as previously pursued, with the hope of obviating the necessity of ovariotomy during the unfavorable condition in which she then was. The peritonitis continued to improve slowly, but a new trouble presented itself in a very painful swelling of the left lower extremity. This continued until the limb was greatly increased in size. Its temperature was much higher than that of its fellow, which seemed to be in a normal condition. She now required large doses of morphia to relieve her pain, and she was losing flesh and strength. She still had nausea, and took almost no nourishment. Her temperature and pulse had again risen to the highest point noted. Both she and her friends were willing and anxious that we should do something more radical than simply to wait for a more favorable condition for operating, if we deemed it proper. I believed, from the symptoms and physical signs, that the inflammatory action was external to the cyst and not within it, and for that reason decided to wait for a subsidence of the acute symptoms, which I rather confidently expected. At the same time I held myself in readiness to operate at once, should the patient not improve or become worse.

The next day she showed signs of slight improvement. Treatment, both local and general, continued. The acute symptoms gradually subsided to those of a subacute condition. The temperature had decreased to 101°; pulse 100, but weak. She was still

unable to retain food, and was extremely weak. I advised further delay. But she did not improve much after this, her temperature and pulse remaining about the same as noted above. Her stomach had regained its power to a slight degree to retain and digest liquid food.

She had now been confined to her bed more than two months; her left leg was powerless; there had not been the slightest improvement during the two previous weeks. We therefore decided to remove the tumor.

Operation.—June 19, 1885, assisted by Drs. J. R. Haney, W. A. Davis, and H. M. Christian, and in the presence of a section of the class from the Polyclinic, I made an incision three inches in length down to the peritoneum, and then checked the hemorrhage, which was quite free, with clamp-forceps. I next very carefully incised the peritoneum, and found, as I had expected, that it was closely united to the cyst-wall. These adhesions of cyst to peritoneum were universal, and it required careful and patient manipulation to separate them. The parts were exceedingly vascular, and hemorrhage was profuse. After separating it as far as possible, I tapped the cyst and allowed the contents, which were semi-liquid and chocolate-colored, to drain away. I next closed the puncture made by the trocar, and then completed the separation of the cyst from its adhesions and removed it. As there was a very general and free oozing of blood from the broken vessels, I introduced a number of large flat sponges and spread them over the bleeding surface. An assistant now made firm pressure upon the external surface of the abdominal walls, whilst I ligated the pedicle and removed the tumor. The cyst developed in the left ovary, and the pedicle was slender, not unusually vascular, and of good length. The right ovary was diseased, contained a number of small cysts, and was double the normal size. I removed it also. Examination showed that the hemorrhage had almost ceased, but there were still a number of points from which blood flowed. The peritoneum was intensely injected, and I disliked very much to pick up bleeding points, for fear of making the hemorrhage worse. I therefore reapplied a large flat sponge and had firm pressure again made from without, whilst I proceeded to place the sutures for the closure of the incision. I then removed the sponge, and found very little blood upon it. I replaced it by a long narrow strip of sponge, which I allowed to project from the lower angle of the wound, and then again cleansed Douglas's cul-de-sac and other dependent portions of the peritoneal cavity, after which I quickly tied the sutures from above downward, removing the long sponge through the lower angle of the wound before I had encroached so closely upon it as to compress it in its removal. It was only slightly stained. I quickly applied the external dressing, making an unusual amount of pressure by cotton and bandage.

The operation was finished, but the patient bore it badly. Her extremities were cold and purple, her face livid, and pulse very weak. Stimulants hypodermically and the application of external heat, which were begun during the operation, were continued after she was returned to bed. She remained in an almost collapsed state for many hours, but gradually reacted, and the next morning was in a fair condition. Her temperature was lower than it had been for weeks; pulse 112, but weak; stomach quiet; no pain; no tympany. She had taken an occasional small piece of ice, but nothing else except the morphine since the operation.

June 21.—Temperature 102°; pulse 120. Slight pain and tenderness in left iliac region. She had been very weak and faint during the night, for which brandy had been administered in repeated small doses. The swelling and pain in the limb had diminished. She had not vomited since the operation, and felt hungry. Ordered a teaspoonful of milk every second hour.

June 22.—Comfortable and doing well. Temperature 99⅘°; pulse 90, and strong. Slight metrostaxis; passed flatus per rectum. Milk increased to a tablespoonful, and retained.

June 24.—Temperature 99°; pulse 85. General condition greatly improved; no pain; no tympany. Examined wound, and found it united throughout; removed sutures.

June 25.—Doing well, and is bright and cheerful. She took nearly a quart of milk during the last twenty-four hours, and digested it.

June 30.—She has been gradually improving. Temperature normal; pulse 95. Bowels moved to-day. She is taking solid food, and expresses herself as feeling quite well. Limb improving; she can now move it.

July 12.—Sat up to-day for the first time,—the twenty-second after the operation.

August 30.—A note received from Dr. Haney to-day informs me that Mrs. M. is going about attending to some of her duties, but that she has not yet regained her strength fully, and that her limb is still weak.

The recovery of this woman under the forlorn circumstances just narrated is certainly a great triumph for our art, but the case serves a better purpose in forcibly illustrating the danger of deferring operative interference in ovarian cystoma simply because the patient is comfortable and suffering no inconvenience from the presence of the tumor. The subject of an ovarian tumor is in constant danger of injury from slight causes which may produce such changes in the tumor as to render what might have been a simple and safe operation one of extreme hazard. This had been a simple, slow-growing cyst, and had not markedly affected the health during its three years

of existence; yet it suddenly became inflamed, and the patient narrowly escaped death as a result. The case furnishes a strong argument in favor of operation as soon as the disease is diagnosticated. Of course there are qualifications, and each case must be decided on its own merits; but the rule that an ovarian tumor should be removed as soon as it is known to exist, is the only safe one to follow.

As a striking contrast to the case just related, and to show the value of the principle enunciated, I will report the following case of

POLYCYSTIC OVARIAN TUMOR—DOUBLE OVARIOTOMY.

A. R. was sent to me August 5, 1885. She was 19 years of age, single. Puberty was established at sixteen, and she had menstruated regularly until six months previously. She then without cause, so far as she knew, began to flow more freely at her periods, and they continued longer. About the same time she noticed a small lump in the right iliac region. This increased in size so that soon the entire hypogastrium was distended, and when I first saw her she was as large as at the eighth month of gestation. Her face showed marked signs of emaciation and pallor, and the drawn, anxious expression of ovarian cystic disease. She was then having a profuse metrorrhagia every two weeks. She had not suffered any pain, and up to within a few weeks very little inconvenience, except for the frequent metrorrhagia.

During the last month, however, her health had been failing. She had lost flesh, had a weak, languid feeling, and suffered much from the weight of the growth. Physical examination in the dorsal position revealed a projecting, slightly irregular abdomen, larger on the right side, dull on percussion over the entire anterior surface, but resonant along the line of the colon. Palpation showed imperfect fluctuation and several firm, irregular masses within the abdominal cavity. The vagina was virginal, the cervix uteri was pointing forward, the body of the uterus retroverted, the whole organ enlarged and soft. It was only slightly movable independently of the tumor. The sound gave a measurement of three inches.

I diagnosticated polycystic disease of the right ovary, and advised immediate operation. Six days afterwards—on August 11—she entered my private hospital, and on the 13th I operated, with the assistance of Drs. H. M. Christian and J. N. Richards. I made an incision two and a half inches in length, and came upon the surface of the tumor, which presented the white, glistening, nacreous appearance especially common to thick-walled polycysts. Tapped with Hodge's trocar. The contents were so thick that they flowed very slowly, and it was necessary to puncture several smaller cysts, which was done without removing the instrument. Even then the mass did not collapse much, because of a large number of young or child-cysts. After closing the puncture I enlarged the incision to three inches, but I had considerable difficulty in removing the tumor. It was necessary to make firm traction with rotatory movements, whilst Dr. Christian exerted a counter-force and pressure through the abdominal walls. Fully ten minutes were occupied in delivering the tumor after it was tapped, but I was rewarded with an incision that looked so small that it seemed almost incredible that this large mass had passed through it. There had not been a single adhesion, but the pedicle was short, thick, and vascular. I tied it with Tait's Staffordshire knot, cut the tumor away, and dropped the stump. The tissues of the left ovary were found to be entirely disorganized and degenerated into a cyst as large as a walnut. This I also removed. The uterus presented a very vascular appearance, and was somewhat enlarged. After assuring myself that the peritoneal cavity was entirely free from any foreign matter, I closed the incision, dressed the wound, and returned the patient to bed. Temperature normal; pulse 96; no pain; but, as she felt a little sore and restless, one-quarter grain of morphine was given hypodermically; small pieces of ice for thirst.

August 14, 8 A.M.—Temperature 99°; pulse 84. Had passed a good night. At 1 P.M., twenty-six hours after the operation, milk in teaspoonful-doses was allowed; water when she desired it.

August 15.—Metrostaxis began this morning.

August 18.—Union complete; removed sutures.

Her recovery was uninterrupted. She sat up for a few minutes on the eleventh day, and went home—eight miles—in a carriage on the eighteenth day after the operation. To-day she sent a request to be permitted to go out, because she is feeling so well.

Certainly nothing could have been gained by procrastination in this case.

DISCUSSION.

Dr. GOODELL congratulated Dr. Baer on the good results obtained in such a serious case as that first reported. Great care in the asepsis of these cases should be observed. In one of his cases of septicæmia, before the operation, after complete union had been secured, the stitches had been removed, and after the patient was up an abscess was observed forming in the line of union, and was very persistent. Finally, after careful search, a ligature which had been tied around the pedicle of one of the ovarian cysts was found and removed. Subsequently the other appeared, and after its removal the abscess healed.

He did not like to remove the stitches so early as Dr. Baer removed them, and he reminded Dr. Baer of a case in which he had assisted Dr. Goodell. The operation was performed upon December 5: convalescence

was rapid, and the patient was so impatient to be home on Christmas that she could not be restrained, and on the nineteenth day after the operation she took the cars for home. The train was derailed, and the jolting caused the cicatrix to open. The physician who was called in closed it immediately, and the patient recovered. In another case, a cough caused the wound to burst open and reveal the bowels after the stitches had been removed. This patient also recovered. For these reasons he never removed the stitches before the eighth day, and not until the bowels had been opened.

Dr. Goodell inquired of Dr. Baer his method of closing the opening in the cyst after it had been tapped, preparatory to its removal from the abdominal cavity. Does he employ pressure-forceps? What method of dressing the abdominal wound?

Dr. Baer closes the cyst-puncture with Wells's clamp-forceps when the cyst-wall is strong enough. In some cases he stitches up the opening, or ties a string below it when the cyst-walls are loose and soft. He closes the external wound, as he had been taught by Dr. Goodell, with silk sutures, and dresses it with salicylated or absorbent cotton, adhesive strips to hold the cotton in place and take the strain off from the stitches, and over all a bandage. He removes the sutures on the fourth or fifth day, in order to avoid the danger of pus forming in the suture-tracks, as has sometimes occurred when he has allowed them to remain as long as eight days.

UTERINE DILATOR.

Dr. Goodell exhibited his improved *uterine dilator*. He said that the main difficulty in the operation for the rapid dilatation of the cervical canal lay in the liability of the blades of the instrument to slip out. This he had in a great measure overcome by having shallow grooves cut into them. Into these grooves the tissues sank, and the resulting friction kept the instrument in place.

Since he had called the attention of the Society to his instrument, not quite a year ago, he had performed the operation forty-one times for dysmenorrhœa and sterility, making in all two hundred and nine such cases. In not a single instance had dangerous symptoms followed, and the average of success was a very large one. He had become firmly convinced that for dysmenorrhœa and sterility the operation of rapid dilatation of the cervical canal would, except in some very rare cases of stenosis of the os externum, wholly supersede the cutting operation, the use of tents, or the slow dilatation by any means whatever. For by the former not only was the measure of success far greater, but the danger from inflammation was very much less. He dilated the parts from three-quarters of an inch to one inch and a quarter, as measured off by the register in the handles, watching the cervix carefully to see what strain it could bear. His instrument could be opened to the width of one and a half inches, but he resorted to that extreme divergence only when wishing to introduce his finger for diagnostic purposes. This he could not ordinarily do unless the parts were relaxed from hemorrhage. Usually, however, when suspecting the existence of a polypus, he did not find it needful to pass in his finger; for, after a moderate dilatation, he introduced a fenestrated forceps and opened it at hap-hazard. In this manner he has repeatedly caught and twisted off a polypus without knowing it was present, the subsequent removal of the growth through the os uteri being the most difficult part of the operation.

Dr. Baer was strongly impressed, by the case of a lady whom he had delivered to-day, as to the advisability of entirely giving up division of the cervix. A year and a half ago he had slit up the cervix posteriorly, and to-day he felt very anxious during the first stage of labor as to the probability of laceration of the uterus starting from the seat of the former operation. The anterior lip was very long, coming down under the pubis, and the posterior lip could not be felt. The case will be reported fully.

When the uterus contains a polypus, the continued hemorrhages reduce the contractility, and a single dilatation will sometimes enlarge the os sufficiently to admit the finger or forceps; but if the uterus is healthy it contracts immediately after the withdrawal of the dilator. He could not recall an instance of inflammation following rapid dilatation. Sterility of long standing is seldom cured by dilatation or any other means.

Dr. C. M. Wilson had seen recently, in the practice of Dr. Ellwood Wilson, a uterus the cervix of which had been divided bilaterally some years ago. The operation had resulted in the development of the symptoms peculiar to a bad laceration of the cervix, with ectropion. Trachelorrhaphy was performed by Dr. Agnew, with complete relief to the patient. Dr. Wilson mentioned this case to call attention to the change in opinion and practice since Emmet proposed his operation.

Dr. Longaker inquired as to the prevention of slipping of the dilator, and called attention to the original method of pressure over the fundus of the uterus.

Dr. J. G. Allen has performed rapid dilatation over seventy-five times, and has never seen any bad results from the operation. The blades of his instrument diverge as they separate, and there is then no disposition to slip out. The blades are more curved than in Dr. Goodell's instrument; he thinks that an advantage in holding the instrument in place: the handles are turned up so as not to touch the bed or table.

Dr. Goodell prefers the slight curve, so

that in flexion of the uterus he can introduce the dilator with its curve reversed to the bend in the womb, and, by opening the dilator in that position, rectify the flexion of the organ. He prefers parallelism of the blades because the stenosis of the cervix is greatest at the external os, and there is no need for dilatation above the internal os. He considers it dangerous to press the fundus of the uterus down while using the dilator, for fear of wounding or even penetrating the tissues, and he uses a strong tenaculum to hold the organ; but since he had got Mr. Gemrig to roughen the blades by grooves he had not been annoyed by the slipping of the instrument.

Dr. GOODELL exhibited two specimens of

PAROVARIAN CYSTS.

In each case the cyst was so detached from the ovary that the former could have been taken away without injury to the ovary. He was greatly tempted to practise conservative surgery in these cases and leave the ovaries untouched; but, on account of apparently incipient cystic degeneration, they also were included in the ligature and removed. Both these cases were operated on in his private hospital, and both had recovered.

In his experience, the removal of parovarian or of broad-ligament cysts was one of the most successful of operations. Out of a large number which he had performed, he could recall but a single fatal case, and in that the result seemed hardly due to the operation. The lady lived in a distant city, and he did not see her after the operation, which was a very easy one. At the end of a week the bowels were moved, the stitches removed, and everything gave promise of an unusually prompt convalescence. On the twelfth day, however, she was seized with uncontrollable vomiting, and she died on the seventeenth day. Six months previously she had had an analogous attack of vomiting, from which she barely escaped with her life. Thus far this year he had had eighteen ovariotomies, and this was the only fatal case among them.

Dr. MONTGOMERY wished to ascertain the opinion of the Society as to the advisability of removing the second ovary when, in an operation for the removal of an ovarian cyst, the other ovary was found to be slightly diseased. In his first ovariotomy, performed in 1879, the second ovary was found to contain numerous small cysts. It was not removed, and the patient has since been twice pregnant, and there has been no appearance of another tumor, nor any symptoms referable to the remaining ovary. If the climacteric has been passed, there would be no question about it.

Dr. BAER inquired if tapping ever cured parovarian cysts. It was formerly reported as a means of cure. Do they always return after tapping? Would Dr. Goodell recommend tapping in undoubted parovarian cyst? He himself felt strongly inclined towards abdominal section in all cases. He thinks the second ovary should be removed when it is not healthy, as the idea of a second operation is very depressing to a patient.

Dr. MONTGOMERY knew of one instance of parovarian cyst which had been tapped and had refilled seven times. It was finally removed by him by peeling out the cyst, as, on opening the abdomen, he found the tumor universally adherent. Only one ligature was required,—viz., on the stump of an enlarged ovary which bulged prominently into the cyst-cavity.

Dr. J. G. ALLEN considered that as an ovary somewhat diseased may give rise to a pregnancy, it should be left. We know too little about the probability of the development of such small cysts into large ones. Until we have certain data on the subject, it must be considered a case of want of information and knowledge.

Dr. PARISH was in accord with Dr. Allen as to the want of knowledge. He has seen diseased ovaries containing numerous small cysts in many autopsies, and there had been no symptoms during life to excite a suspicion of their existence. The existence of minute cysts cannot be considered as proving any liability to the production of large ones. If the second ovary contained a cyst as large as a partridge's egg, he would remove it; but if numerous cysts as small as split peas were present, he would not. The possibility of conception should be considered as well as that of a cyst.

Dr. GOODELL acknowledged the truth of the points made by Drs. Allen and Parish, and he believed that he had repeatedly removed the second ovary unnecessarily. Yet the history of his own ovariotomies shows a return of the disease in the remaining ovary in about two per cent., and he thought he erred on the safe and right side. The social conditions of the patient would always have a great weight with him. If an heir were wanted or the patient were young, he would leave a suspicious-looking ovary or try to remove the diseased portion of it. But in the majority of his cases where there was any doubt he removed the ovary. Of course, under such a rule he must remove ovaries which might never give any trouble in the future. But the mental agony of women when informed that the operation must be performed a second time upon them, and, on the other hand, the great joy and satisfaction of patients when assured, after the close of an operation, that both ovaries had been removed, have determined him that, other things being equal, it is better to remove the second ovary.

As to the cure of parovarian cysts by tapping, his own experience is not sufficient yet to decide absolutely. He would advise the

radical operation; but if the patient, after understanding the liability of return, wished it, he would tap, as there was but little danger from tapping such cysts. A patient was tapped by Dr. Atlee some twenty years ago; five years afterwards the cyst filled, and was tapped by Dr. Goodell. It then partly refilled, and so remained for a long while; the fluid then was gradually absorbed, and never returned. He has had, besides this one, two cases which he tapped, one five years ago and the other three years ago, and there has been no return whatever of the fluid. On the other hand, he has had two or three cases in which the cyst burst spontaneously several times and yet refilled invariably. The rupture was followed immediately by some collapse and pain, and later by an excessive secretion of urine with complete subsidence of the tumor. He had also heard of several cases of rupture, but, as far as he has learned the history of such cases, the cyst has always returned. The reports of the cure of ovarian cysts by tapping and injection of tincture of iodine must be true only of parovarian cysts.

Dr. HARRIS knew of a case of parovarian cyst in which fourteen years had elapsed between the tapping and the subsequent refilling.

(To be continued.)

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, APRIL 23, 1885.

The President, E. O. SHAKESPEARE, M.D., in the chair.

NOTES ON THE MORBID ANATOMY OF PNEUMONIA.

DR. OSLER read a paper summarizing his experience while Pathologist at the Montreal General Hospital. Of one hundred and five autopsies in cases of lobar pneumonia of which notes were available, five were discarded for various reasons. The mortality at the hospital is high, on account of the large percentage of grave cases which are admitted, very many subjects being debilitated and dissipated.

Of the one hundred cases, seventy were males and thirty females. Of ninety-four instances in which the age was given, there were eleven cases under twenty years, twelve between the twentieth and thirtieth, eighteen between the thirtieth and fortieth, twenty between the fortieth and fiftieth, twelve between the fiftieth and sixtieth years, and twenty cases over sixty. In fifty-one cases the right lung was affected, in thirty-two the left, in seventeen both. Other details were given of the various lobes affected. The heaviest lung weighed was two thousand three hundred and three grammes, and in eight instances the affected organ weighed over two thousand grammes. In about fifty per cent. of the cases there was red hepatization, in thirty per cent. mixed red and gray, and in about twenty per cent. gray hepatization. The condition of the pleural air-passages, bronchial glands, and unaffected portions of the lung-tissue were described. Among the terminations there were four instances of abscess formation, three cases of gangrene, and one in which there was a process of fibroid induration beginning in the lung. This case was a man aged 55, admitted with pneumonia of the right lung five days after the initial chill. Resolution did not occur, and he died in the fifth week. Post mortem, the right lung was found solid, grayish in color, and in many areas the tissues had a smooth, homogeneous, translucent aspect, and in these a fibroid change was going on; the alveolar walls were thickened, and the fibrinous plugs in the air-cells seemed undergoing transformation into connective tissue. (A slide was shown illustrating this.) There were no caseous portions, and no tubercles.

As to the other organs, the frequency with which large, firm clots were found in the heart was specially dwelt upon. In only thirty-five instances was the spleen much enlarged. In one it weighed six hundred and seventy grammes. In twenty-five per cent. there were marked fibroid changes in the kidneys. Of the complications, there were four cases of pericarditis and sixteen cases of endocarditis. In eight instances the meninges of the brain were inflamed, in five of them associated with ulcerative endocarditis. In five instances there was acute croupous or membranous colitis, and in one instance croupous gastritis.

Dr. TYSON, in the discussion of Prof. Osler's paper, said that he had been rather incredulous of the termination of croupous pneumonia in fibroid induration, but the specimen exhibited by Dr. Osler demonstrates conclusively that such a condition exists. The facts presented in the paper are such as are not generally collated. Collective reports of autopsies in cases of particular forms of disease would be of great value in the study of pathology.

Dr. FORMAD asked Dr. Osler why his was not a case of acute phthisis. Croupous pneumonia is a very common accident in acute phthisis. It is croupous pneumonia which causes death, which is well shown by recent investigations of Mercur, of the University of Pennsylvania. Dr. Formad did not believe that croupous pneumonia can last five weeks.

Dr. SHAKESPEARE said that the remarks of Dr. Osler about the frequent existence of very firm clots in the right heart, extending into the ventricles, can be corroborated by any one who makes autopsies of cases of pneumonia at hospitals. He had seen them in cases of phthisis

quite as extensive and firm, reaching into the vessel going to the affected part of the lung. It is interesting to note the systemic involvement of these cases of croupous pneumonia, and the affection of internal organs as well as lungs in the process which has been regarded as a local disease. We have to do with a general, wide-reaching affection rather than local inflammation. The opinion was advanced by Dr. Osler that the exudate in the air-cells organized, that the process in the organization of the croupous exudate is similar to that in the clot in arteries after ligation, and that comparison was the point which Dr. Shakespeare wanted to bring out. Dr. Shakespeare said that he did not believe that a blood-clot in a vessel ever organizes, and his opinion is based on facts detailed in an investigation which he has published on the healing of arteries after ligature. The vessel healed not by the agency of the white cells caught in the meshes of the reticulum, but by proliferation of the endothelium of the tunica intima and subjacent connective-tissue cells. He thought there was reason to believe that there is in this process in the lungs an analogue of the process after ligature. We have to do with an outgrowth of the inter-alveolar walls. The ground which Dr. Shakespeare takes is purely that of analogy to the process in a blood-clot in a ligatured artery.

Dr. Osler, in closing the discussion, said that it was well known that a croupous pneumonia might persist five or six weeks, or even longer, before resolution took place. It was difficult for any one who had not had the experience to realize the anxiety which such a case would cause. He had reported two such cases of delayed resolution, one in the fourth week and one in the eighth, both with perfect recovery. He was quite aware of the difficulty in distinguishing certain cases of acute phthisis from pneumonia, and had seen a case with Dr. Ross in which the diagnosis was for some time in doubt; but in the case in question the person had been under observation from the outset, and the symptoms were those of ordinary pneumonia. Post mortem there were no caseous masses, no miliary tubercles; only the condition already described. The termination in fibroid induration, though rare, was frequently well recognized. In Cornil and Ranvier's Manual, as well as in Green's Pathology, was a figure which might have been taken from the slide under the microscope.

Dr. M. H. Fussell, of Manayunk, presented specimens from a case of

PRIMARY TUBERCULOSIS OF THE KIDNEYS.

The reporter never saw the subject alive from whom the specimens were removed, having performed the post-mortem examination for a friend.

Case of Edward B., æt. 40, single, by trade a paper-maker. In following his calling he was forced to stand in a dust-loaded atmosphere from morning until night. He worked at this trade from boyhood steadily, with the exception of four years during the late war. His grandfather died of bladder-trouble; his father died of apoplexy; his mother, brothers, and sisters are all living and healthy. He was always a robust man; his weight was one hundred and seventy pounds, and he never had any serious illness; he had gonorrhœa during the war. Four years ago, while in camp, he made a misstep and fell. The next morning he passed much blood in his urine. Previous to this he was perfectly well. From this time until death he was troubled with slight pain in his loins and with frequent micturition; his urine was sometimes bloody, sometimes milky. The patient's bladder finally became incontinent, and he was forced to wear a urinal.

The patient's general strength did not seem to suffer until the past six months, when he began to lose flesh and strength, and at death he was much emaciated. He had never had any cough or diarrhœa. Two weeks before death he began to vomit: this increased in frequency until he was unable to retain anything on his stomach. Just before death breathing was rapid and full. The patient was very restless, vomited, and passed urine freely. The pupils were dilated.

Dr. Fussell examined the urine several times. The specific gravity ranged from 1.002 to 1.010. Large amounts were passed. Albumen was present. The microscope showed pus, blood, and granular epithelium. Many of the cells were irregular in shape, the pyramidal form predominating. No casts were found at any time. Unfortunately, a critical physical examination of the patient was never made. At different times surgeons had sounded him for stone and had failed to find any.

Post-Mortem.—Nothing especial noted on the exterior of the body. *Thorax:* Heart about normal in size; the muscle looks normal, and contains a large amount of fluid blood and currant-jelly clots; a small decolorized clot on the left side; valves normal.

Lungs: Both pleural cavities obliterated; the pleuritic adhesions were tough, the lungs being with difficulty torn from the cavity; in places the pleura was much thickened; the surface of both lungs was studded with miliary tubercles; on section, the lung-substance was crepitant and studded with myriads of miliary tubercles; no caseous masses nor cavities were found in either lung; the bronchial glands were enlarged, not caseous.

Abdomen: Viscera in normal position; peritoneum free from tubercles and of a healthy look.

Liver of normal size and color; over the surface a few stellate cicatrices noted, but no tubercles seen on the surface, nor on section of the organ; the bile-ducts free.

The stomach contained greenish-black fluid, the mucous membrane of a greenish color corresponding to the contained fluid; the rugæ were much enlarged, especially at the cardiac end; near the pylorus was a small injected spot.

Kidneys: The right measures six inches in length and three in width, and is of a reddish hue; the surface is studded with tubercles; on stripping off the capsules, the larger of these remain with the kidney-structure, while some of the smaller ones are torn off; on section, the cortical substance is seen to have a thickness of about one-third of an inch; numerous foci of softening are seen, of the size of a nickel five-cent piece; there are very many smaller ones, situated mostly in the pyramids; numerous miliary tubercles throughout the substance of the kidney; the foci of softening are evidently due to breaking down of the tubercles; the ureter is dilated, measuring half an inch across in some portions; the mucous membrane is ulcerated; the pelvis of the kidney is not dilated, and shows miliary tubercles.

The left kidney is large, and is converted into five or six cysts; there is but little kidney-substance remaining; the surface of the kidney is studded with a few tubercles; the cysts are lined by a thick leathery membrane, which can be stripped from the kidney-substance; on puncturing the cysts, a perfectly clear serous fluid at first escaped, soon followed by a milky substance containing some cheesy masses; the pelvis is smaller than usual, the ureter entirely occluded.

The supra-renal capsule has undergone degeneration, is of a uniform yellowish-white color, and presents tubercles.

The bladder was slightly contracted, the mucous membrane ulcerated, the muscular coat being exposed; the vesical trigone of a vivid red color and studded with miliary tubercles.

The intestines were found to be normal; no enlargement of lymphatic elements; the mesenteric glands were slightly enlarged; the prostate gland and spleen were not examined.

Prof. William Osler kindly made sections of the kidney and supra-renal capsule, and the reporter is indebted to him for the following report:

First. Extensive, wide-spread, small-celled infiltrations between tubules and Malpighian tufts.

Second. Distinct miliary tubercles, with centrally-placed giant-cells.

Third. Areas of softening and disintegration. Tubercle-bacilli carefully sought for, but only two undoubted specimens found.

Supra-renal capsule showed miliary tubercle with centrally-placed giant-cells.

Dr. FORMAD referred to a similar specimen which had been exhibited by Prof. Tyson at a former meeting of the Society.

Dr. OSLER remarked that Dr. Fussell's case corresponded in all essentials to what we know as tubercular nephritis. The bacilli, however, were scarce and difficult to find. Since the report of Dr. Tyson's case a few weeks ago, he had had occasion to look over the notes of several cases, and found that they formed a complete series, from cases of unilateral disease to instances with tuberculosis of the entire urinary tract and general infection. The condition was not infrequently met with accidentally in persons dead of other affections.

TUBERCLE-BACILLI IN THE URINE.

Dr. OSLER showed a slide of pus from the urine in another case of tuberculous kidney, with the tubercle-bacilli stained.

The President, Dr. SHAKESPEARE, reported a case of

INTESTINAL STRICTURE.

The patient was admitted to the Philadelphia Hospital one week previous to her death, under the care of Dr. Evans, the house-physician. She had obstinate constipation, followed by stercoraceous vomiting. She suffered acutely, lapsed into an unconscious state, and died, all treatment proving ineffectual.

At the autopsy the thoracic organs were found apparently normal. In the right iliac fossa a lobulated tumor was apparent on opening the abdominal cavity. The colon was distended with gas in the transverse portion, and in the descending portion was narrow. The ascending and transverse portions had hardened fæces. There was a double twist of the intestine and two strictures,—one in the ileum, two inches above the ileo-cæcal valve, and one two inches below the valve. They would not admit the finger. There was a ring of hardened tissue in each stricture. There was congestion of the mucous membrane in the small intestine, and adhesion of the first part of the ascending colon on its under surface to the abdominal parietes. The kidneys were normal. A large tumor of the right ovary was also present, attached to the uterus.

Dr. FORMAD, who made the autopsy, remarked that acute peritonitis had in this case become chronic, and that it was the contraction which made the strictures. The cause was probably the abdominal tumor. He was not aware that there was a case on record where a tumor produced stricture. The constriction was due to outside pressure.

NITRO-GLYCERIN is highly praised by Rossbach (*Berl. Klin. Woch.*) as a remedy for contracted kidney. It is usually given in doses of two to three drops of a one-per-cent. solution in alcohol.

REVIEWS AND BOOK NOTICES.

How to Drain a House: Practical Information for Householders. By George E. Waring, Jr., M.Inst.C.E., Consulting Engineer for Sanitary Drainage, Newport, Rhode Island. New York, Henry Holt & Co., 1885. 12mo, cloth, pp. 222. Price, $1.25.

In the growing interest shown by the community in hygienic matters, and the increasing intelligence as to the rational causes of health and disease, there is promise of prospective benefit to the medical profession; for the better the public can be brought to understand problems of health and disease, the more discriminating will it be as regards the intelligence and skill of its medical attendants. Imposture thrives upon ignorance; and it is therefore to the interest of the medical profession to enlighten the people, in order that they may be more exacting in their requirements. The reaction will certainly advance the standard of medical practice.

Colonel Waring's book can be read with interest and profit by all who are interested in domestic hygiene, and it will serve to strengthen the arguments of the medical attendant in cases of needed improvements in houses where typhoid fever or diphtheria exists, or where it is only threatened.

The Formation of Poisons by Micro-Organisms. A Biological Study of the Theory of Germ-Disease. By G. V. Black, M.D., D.D.S. Philadelphia, P. Blakiston, Son & Co., 1884. Pp. 178.

This is a clear, concise, and judicious exposition of the present status of the germ-theory of disease, arranged in the form of lectures, which allow of a more popular and readable method than the ordinary style of the scientific treatise. In an appendix the application of the germ-theory to dental caries is discussed.

A Text-Book of Physiology. By M. Foster, M.A., M.D., F.R.S. Third American from the Fourth and Revised English Edition. With Extensive Notes and Additions by Edward T. Reichert, M.D. With Two Hundred and Seventy-One Illustrations. Philadelphia, Lea Brothers & Co., 1885. Sheep, 12mo, pp. 911.

Foster's Physiology does not need to be introduced to our readers. Its arrangement is very good. Commencing with the study of plasma and the chemistry and physiology of the blood, the contractile tissues, the nervous tissues, and the vascular mechanism are considered in book first; book second takes up the functions of special organs and apparatus; book third, the central nervous system, its instruments and functions, concluding with special muscular mechanisms; while book fourth is devoted to the tissues and mechanisms of reproduction. The work is clearly written, and the illustrations are good. The additions made by Dr. Reichert have considerably enhanced the value of a work which has a recognized position as a text-book having special advantages for students.

A Complete Pronouncing Medical Dictionary, embracing the Terminology of Medicine and the Kindred Sciences, with their Signification, Etymology, and Pronunciation. With an Appendix. By Joseph Thomas, M.D., LL.D. On the Basis of Thomas's Comprehensive Pronouncing Medical Dictionary. Philadelphia, J. B. Lippincott Co., 1886. 8vo, cloth, pp. 844.

This is a handsomely-printed volume of eight hundred and forty-four double-column pages, forming a valuable work of reference. In examining the work it is evident that much learning and labor have been expended upon it in preparing concise definitions, and its etymologies are unusually full. It is planned to include the technology of the kindred sciences, but especial attention has been given to medicine. Its appendices are articles upon Latin phrases and on writing prescriptions, with tables of doses, orders and families of living mammalia, chemical symbols, and metric weights and measures.

NEW REMEDIES AND CLINICAL NOTES.

Treatment of Syphilis by Liebreich's Method.—It is now some time since the employment of subcutaneous injection of hydrargyrum formamidatum was recommended in the treatment of syphilis. The interval has not been misspent by Dr. Carl Kopp, who has brought together the results of his experience in the *Vierteljahr. für Dermatologie und Syphilis*. Altogether three thousand injections were made on one hundred and twenty-six cases, giving an average of twenty-five injections per case. Sixty-five cases were males, and sixty-one females. Fifty-three times the disease was treated while in its primary form. The secondary stages were treated seventy-one times. Only two cases belonged to the tertiary period. The symptoms disappeared under the treatment in ninety-two cases. Thirteen times the injections had to be discontinued on account of untoward effects. In spite of prolonged treatment, eleven cases failed to be benefited by this method. Ten cases were doing well under the treatment, but this was allowed to lapse from some cause or other. Tenderness about the seat of injection was noted altogether sixty-five times; thirty-four times this

subsided in an hour, and in the remainder the tenderness lasted from two to twenty-four hours. Forty-one times an induration developed at the point of puncture. An abscess formed once, in a woman. Salivation and stomatitis were recorded twelve times, eight times in men. The injections were continued for a long period in thirty-nine cases, without any unpleasant after-effects. Universal erythema in a woman, eczema of both lower extremities in a man, and parenchymatous nephritis in a woman were the complications observed during the treatment; but it would be difficult to say what share the injections had in their production.

We append some of the conclusions formulated by Dr. Kopp. Liebreich's preparation is decidedly useful in certain of the milder forms of primary lues, as also for many slight secondaries. The formamide should not be employed in severe cases where there are large papules or thick infiltrations: inunction is still the best method of treating these cases. The tertiary forms are likewise not to be treated by the formamide. Relapses are by no means prevented by Liebreich's method; on the contrary, they appear to be extraordinarily common after this treatment. —*Lancet.*

The Use of Antimonials in Pneumonia and Inflammation.—D. Leith Napier, M.D. (*Practitioner* for September), states that while children do not bear the antimonials as well as adults, the following "mistura scillæsalina" has proved of great utility (sometimes combined with a suitable dose of belladonna or hyoscyamus) in the febrile catarrhal condition attending dentition:

Saline Mixture.

℞ Liq. antimonii tart.,
Spts. ætheris nitrosi, āā fʒiij;
Liq. ammon. acet., fʒij;
Aquam ad fʒviij. M.
Fiat mistura.

Squill Mixture.

℞ Vin. ipecac.,
Vin. antimonii, āā fʒij;
Syr. scillæ, fʒij;
Aquam ad fʒviij. M.
Fiat mistura.

These mixtures may be given alone, the first being more generally employed. In some cases the squill mixture is given alone, as in the latter stages of pneumonia; but, as a rule, equal parts of each were used.

The benefits of antimonials are more evident in pneumonia than in other inflammations; but, while Dr. Nias (*Practitioner* for August) follows Trousseau in giving comparatively large doses in the stage of engorgement (not hepatization), Dr. Napier treats the first stages with salicylic acid, antipyrine, or quinine, reserving the antimony for the stage of resolution, except in cases marked by low stamina and great debility.

Treatment of Vomiting of Pregnancy.—Two causes are cited by Dr. Morival (*Thèse de Paris*, 1884) to explain the persistent vomiting in some cases of pregnancy: neuræsthenic influence and organic lesions. In treatment, the first effort should be directed towards the discovery of organic lesions, because they may often be relieved with facility. The most frequent are uterine deviations, ulcerations or stenosis of the uterine neck, and perhaps the abnormal adhesions of the membranes. For ulcerations a ten-per-cent. solution of nitrate of silver may be used with advantage. With regard to versions, their reduction should be effected in the horizontal posture, with the hips higher than the head; this postural treatment should be maintained for several weeks. If no apparent lesions are found, resource can be had to medical means, at first anti-nervous,—potassium bromide, belladonna, morphine, applications of ice or of ether spray; then inhalations of oxygen might be tried, or galvanism with a continuous descending current. In all cases stimulants and nutrient enemata should be employed. Should these means fail, digital dilatation by Copeman's method may be resorted to; and, as a last resort, premature delivery should be practised if all other means fail to check the vomiting.—*Bull. Gén. de Thérapeutique*, August 30. (Probably the best remedy for persistent vomiting is cocaine, as suggested by Dr. Bauduy, *New York Medical Journal*, September 26, 1885.)

Concentrated Solutions of Saline Cathartics in Dropsy.—Dr. Matthew Hay, of Edinburgh (who has accepted a chair at Johns Hopkins University), presented a novel method for the treatment of serous effusions in the *Lancet* (April, 1883), the good results of which have been recently reaffirmed by Dr. W. G. Eggleston (*Jour. Amer. Med. Assoc.*, March, 1885). In cardiac dropsy, or pleural or abdominal effusion, abstinence from water and liquid food is enjoined for one day, and on the following morning a comparatively large dose (three ounces) of magnesium sulphate dissolved in two tablespoonfuls of hot water is to be administered. The results which have been reported have been surprising, especially where the saline is repeated on the second morning. Large watery evacuations are obtained, and the effect may be enhanced by the subsequent use of jaborandi (ext. fld. twenty drops), to act upon the skin. This method of treatment deserves further trial by the profession, not forgetting, however, that in children or persons subject to bowel-disorder a serious entero-colitis might be developed. Christison reported a case of a boy who took two ounces

of Epsom salt and died with symptoms of gastro-enteritis without purgation. The hypodermic injection of solution of magnesium sulphate has been advocated in cases of dropsy.

Hydrobromate of Hyoscine.—Prof. H. C. Wood, in the *Therapeutic Gazette* for September, publishes an additional note upon his experience with the hydrobromate of hyoscine. The dose for an adult he places at one-eightieth of a grain. In spermatorrhœa he believes it to have a specific field of usefulness: thus, in a case in which the discharges were three a week, they were completely arrested by a dose of one-seventy-fifth of a grain at bedtime each night. The effects of the drug do not seem to be very lasting, but they are quite evident during its administration. It was employed in the penitentiary by Dr. Robinson, who reported that its results were surprisingly good. In a case of a woman with eroto-mania its influence was also decidedly beneficial. As a hypnotic it is useful where sleep is prevented by too great cerebral activity, by a succession of thoughts, or where sleep is disturbed by urgent dreams. In intense fever with delirium the hyoscine has seemed to control this symptom. Used hypodermically, in one case it seemed to produce a paralyzing effect upon the pneumogastric nerves; the patient, a woman, had an attack of suffocation, apparently paralytic and laryngeal. The dyspnœa of a child suffering with anginose scarlet fever was much increased after taking the drug, and in the course of an hour or two death resulted, whether from the use of the drug or not is uncertain; but these two cases are sufficient to arouse suspicion.

Ammonium Carbonate in Scarlet Fever.—Dr. A. W. Jackson, of Brooklyn, calls attention to the treatment of scarlatina first brought prominently into notice by Dr. Peart, of England. This consists in the administration of from three to seven grains of carbonate of ammonia every hour for the first day, and then at longer intervals. Purgatives are to be avoided during the early stages of the disease. The writer states that he has had occasion to test this mode of treatment, and can endorse it heartily. In addition, he employs the fluid extract of eucalyptus internally and as a gargle. When there is much exudation, a mixture of carbolic acid and iodine in glycerin is painted over the parts. In too rapid recession of the rash, Dr. Jackson applies cloths dipped in thick mustard-water, or wraps the child in blankets wrung out in hot water.—*Medical Record.*

Naphthaline in Chronic Intestinal Catarrh.—Dr. P. Selfverskiöld, of Sweden, has employed naphthaline in intestinal catarrh with advantage. To children it may be given in mucilage, and to adults in capsules with a drop or two of ethereal solution of bergamot. The drug should be purified by washing with alcohol and resublimation; of it one or two drachms are given in divided doses during the day. The dose recommended by Pauli was: for children under one year of age, one grain and a half daily; for those of five years, four to five grains. In chronic cases of intestinal catarrh this remedy has proved to be advantageous.—*Lancet.*

Quillaia Saponaria has been recommended as a substitute for senega by Dr. Kobert (*Centralblatt für Klinische Medizin*). The glucosides contained in senega are found in almost the same proportions in quillaia, which is cheaper, easier to take, and is less expensive than senega. It is best given in a decoction (quillaia, 5 parts; water, 200), of which the usual adult dose is a tablespoonful. Inflammatory conditions of the alimentary canal and gastric ulcer are contraindications against the use of the drug.—*Therap. Gaz.*

Permanganate of Potassium in Amenorrhœa has found a recent advocate in Dr. E. J. Doering, of Chicago. It is administered in capsules midway between meals, and is to be followed by large draughts of some pure mineral water, like Silurian. It is required to be continued for two weeks in doses of from two to four grains several times daily.—*Med. Journ. and Examiner.*

Administration of Paraldehyde.—

℞ Pulv. tragacanth. comp. (Br.), gr. xx;
Syr. aurantii, ʒiv;
Paraldehydis, ʒj;
Sp. chloroformis, ♏xv;
Aquæ, q. s. ad ʒiij. M.

To be given at bedtime in a single dose.—William Craig, M.D., in *Brit. Med. Jour.*

MISCELLANY.

Changes of Address.—Roberts Bartholow, M.D., has removed his residence and office to 1525–27 Locust Street.

Theophilus Parvin, M.D., has removed to 1718 Walnut Street.

Charles K. Mills, M.D., has removed to 1909 Chestnut Street.

B. F. Baer, M.D., has removed to 2010 Chestnut Street.

J. M. Holland, M.D., has taken an office at 1914 Rittenhouse Square.

The Address Introductory to the One Hundred and Twentieth Course of Lectures in the Medical Department of the University of Pennsylvania was delivered by Prof. William Osler, M.D., on Thursday, October 1.

The Introductory to the Sixty-first Annual Course of Lectures at the Jefferson College was delivered September 30, at the Hospital of the College, by Prof. J. W. Holland, M.D.

Liebig's Beef Tonic.—Dr. W. F. Steuart, of the Marine Hospital, Baltimore, Maryland, pronounces "Colden's Liquid Beef Tonic" an excellent invigorator of the system.

NOTES AND QUERIES.

MR. EDITOR,—I trust it will not be considered indelicate if I make an editorial on "The Attitude of the Medical Profession towards Criminals," published in the *Medical Times*, August 22, the subject of some comments. First, I may say that I heartily approve the sentiments there expressed, and, inasmuch as it amounts to a general invitation to the profession for an expression of opinion on "the nature of punishment, its effects upon the individual, and its practicability," a few reflections may not appear out of place.

In New York, as in all large cities, there are each day a number of persons committed to prison for a term varying from a few days to a few months, because of minor offences against the law. Now, the treatment of this class of prisoners must necessarily differ somewhat from that of criminals consigned to the penitentiary for one or more years. In the case of the latter the term of imprisonment is sufficiently long to admit of a course of discipline which may be considered as not only punitory to the individual, but also as tending to improve his moral and perhaps physical state. His imprisonment, in other words, can be made a graded school of moral and physical training. The great length of time for which the person is to be confined, aside from any other consideration, would necessarily make him feel that he was undergoing a punishment. No tramp, however low his condition, it may be safe to say, would voluntarily commit a crime with the hope of finding in the walls of such a prison a comfortable home, sheltered from the storms of an inclement season.

My impression is that the greatest evil arising from modern sentimental prison reform is the influence which it has upon persons who contemplate doing acts for which they will be liable to be imprisoned for only a few days or months. Many of this class of persons are lazy, filthy, habitually addicted to drink and bad food, and perhaps to sleeping out of doors. Their self-respect is not so great as to make them feel ashamed of being sent to "the island" (a term synonymous in New York with the prison). Now, what sort of punishment would it be for one of these persons—who had, for instance, without provocation insulted a lady and broken a gentleman's nose—to be taken out of the cold and dirty streets and sent to a prison for a few weeks or months, where he would be accommodated with a warm cell, a decent bed, perhaps provided with a clean suit of clothes, given good food and medical care, and allowed to lie in idleness, or at least not compelled to do a sufficient amount of labor to pay for half the expense the city had incurred in feeding and sheltering him in his new home? There are two important facts to be taken into consideration in dealing with violators of the law, aside from but intimately connected with the protection of the state,—namely, the treatment of the transgressor in a manner to make him feel that he is being punished, while at the same time improving him morally. The mere fact of his being a transgressor of the law shows that he is morally defective. Now, it is just the compelling him to do such things or to undergo such restrictions as will develop this that will be regarded by him as the greatest punishment. Now, cleanliness and a proper supply of wholesome food and exercise are not opposed to morality, but the contrary. The violator of the law should be compelled to keep himself clean, to earn his own food, and to obtain exercise by doing such work as may be assigned to him to do. What greater punishment to the law-breaker, consistent with Christian doctrine, than to take from him his liberty, make him live soberly, and compel him to labor? The tramp dislikes nothing more than labor and restraint. The petty thief, as well as the bank-robber, has obtained this title because of a dislike for honest labor. The woman-beater would rather do anything else than to embrace the whipping-post or be confined and compelled to break stone or delve in the earth. Honest industry and living without many of the luxuries of life are generally distasteful to all habitual violators of law, especially so when observed under compulsion. Yet this is the lot to which the majority of men are of necessity subjected,—men who really constitute the power of the state. Why, then, should evil-doers, who are practically a nuisance to the community, be exempted from that to which Providence has called the best of mankind, and which to this evil class is the greatest of punishments while it is at the same time of benefit to the state? The addition of filth and unwholesome surroundings in prison-life would be a punishment only to the decent man who had accidentally got himself into the clutches of the law, and for whom restraint and hard physical labor would be sufficient to bring about repentance. For the habitual violator of social order and decency such surroundings would simply be a continuation of that to which he was habituated. But if he were himself compelled to do his own cleaning in addition to his other daily labors, it would be to him a punishment, while at the same time to his own advantage and that of his fellow-prisoners. These persons sent to prison for only a short time could not of course be expected to learn a trade, as some do who are sentenced for years. Certainly this would not be as great a punishment as if they were compelled to do farm or agricultural work. If there were no opportunity to labor at farm-work, there could always be an opportunity to break stone or work on public improvements. No man should be allowed to board and obtain superior diet, or shirk his duties, by paying the warden an extra fee. Ferdinand Ward, who it is claimed nearly ruined the Grant family, it is said is enabled to live in jail like a prince by paying the warden seventy-five dollars a week from his stolen money.

It is true that some opposition has been manifested towards prison-labor on the supposition that it depreciates the value of work done by honest citizens. But this is the view of the politician and individual, not of the statesman and nation. It could not be expected if I were a shoemaker, and should go to a town where there was but one other shoemaker, that he would welcome me as a rival; but the citizens in general would be glad to have me settle among them and ply my trade, especially so if in not plying my trade they should be compelled to support me gratuitously out of their own daily earnings. The same should be true of prison-labor. If prisoners do not work, then we must take bread from the mouths of our children and give them to eat without being recompensed. But he who produces more than he consumes becomes the servant of the people, or makes the state his debtor. If the tramp does not dread such prison-life, but prefers to be "sent up" for ten days to sleeping out in the cold, the public will not object, so long as they know that while there he is earning them bread and butter and giving them a day of rest.

Thus far only a portion of the questions suggested in the editorial referred to have been touched upon. Perhaps some time in the future I will take the liberty of expressing some ideas regarding the ability of specialists to declare upon the sanity or insanity, responsibility or irresponsibility, of criminals. Space will not admit of it at present.

Truly yours,

R. C. SHULTZ.

NEW YORK, September 3, 1885.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 13, 1885, *TO SEPTEMBER* 26, 1885.

COLONEL JOHN CAMPBELL, SURGEON.—Retired from active service September 16, 1885. S. O. 212, A. G. O., September 16, 1885.

PROMOTIONS.

LIEUTENANT-COLONEL T. A. MCPARLIN, ASSISTANT MEDICAL PURVEYOR.—To be Surgeon, with rank of Colonel, to date from September 16, 1885.

MAJOR B. J. D. IRWIN, SURGEON.—To be Assistant Medical Purveyor, with rank of Lieutenant Colonel, to date from September 16, 1885.

CAPTAIN B. F. POPE, ASSISTANT-SURGEON.—To be Surgeon, with rank of Major, to date from September 16, 1885.

APPOINTMENT.

EDWARD R. MORRIS.—To be Assistant-Surgeon, with rank of First-Lieutenant, to date from September 17, 1885.

CAPTAIN F. C. AINSWORTH, ASSISTANT-SURGEON.—From Department of Texas to New York City, for duty as member of the Army Medical Examining Board. S. O. 214, A. G. O., September 18, 1885.

CAPTAIN G. W. ADAIR, ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 104, Department of Dakota, September 18, 1885.

CAPTAIN WILLIAM C. SHANNON, ASSISTANT-SURGEON.—Granted leave of absence for four months, to take effect about October 1. S. O. 215, A. G. O., September 19, 1885.

FIRST-LIEUTENANT GEORGE E. BUSHNELL, ASSISTANT-SURGEON.—Ordered from Department of Dakota to Department of the East. S. O. 219, A. G. O., September 24, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM SEPTEMBER 13, 1885, *TO SEPTEMBER* 26, 1885.

MURRAY, J. M., PASSED ASSISTANT-SURGEON.—Resignation accepted, to take effect January 1, 1886.

ROSS, J. W., SURGEON.—To special duty at New York.

DUNGAN, J. S., MEDICAL DIRECTOR.—Waiting orders.

PHILADELPHIA, OCTOBER 17, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON IDIOPATHIC PYELITIS AND RHEUMATISM.

Delivered at the Philadelphia Hospital

BY EDWARD T. BRUEN, M.D.,

Physician to the Hospital, and Assistant Professor of Physical Diagnosis in the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

IDIOPATHIC PYELITIS.

GENTLEMEN, — The appearance of this patient indicates that he is suffering from some condition which has seriously depressed his vitality. His eyes are sunken, his face is wasted, and his whole body is thinner than is natural with him. Inquiring into his history, we find that during the past three or four months he has been subject to occasional chills, followed by flushes and sweating. Since admission into the hospital his temperature has ranged between 99° and 101°. These symptoms would at once suggest that there is a centre of suppuration in his body. As a matter of fact, its location was speedily decided by an examination of the urine. On standing, the urine threw down a white deposit, which, upon microscopical examination, proved to be pus. The reaction of the urine was acid. These points would suggest the existence of pyelitis.

The diagnosis of pyuria is comparatively easy, although the exact cause of the pyuria is often obscure. In the first place, let me give you the special points that would indicate that the pus was formed in the kidney rather than in the bladder, and then I shall speak of the causes of pyelitis. When pus originates in the pelvis of the kidney, it will in all probability be passed mixed with urine, which will preserve its normal reaction, being either neutral or acid. On microscopical examination, the pus-cells will probably be found not associated with many of the epithelial cells of the genito-urinary tract. Let me here call attention to a point which is of some consequence where the pyelitis is recent: it is that the pus-cells are usually round in what we might call the physiological type. An unfavorable deduction is always to be drawn if the pus-cells are irregularly shaped.

In this case we have the ordinary pus-cells, giving us the idea that the cause of the formation of pus is recent. Such signs would indicate simple pyelitis. But suppose that associated with pyelitis there was a suppurative process going on in the kidney, what would be the evidence of such process? Probably the formation of a few casts, as a rule accompanied by some renal epithelium. Such appearances, indicating involvement of the kidney-substance, are quite important to recognize in connection with pyelitis. The points which would indicate that the pus came from the bladder would be the following: pus from the bladder is usually mixed with the epithelial cells of the bladder, and it is also mixed with mucus, for in cystitis there is a formation of a large quantity of mucus. Further than this, the reaction of the urine will probably be alkaline. This alkalinity is produced by the presence of volatile alkali, such as ammonia, which is characteristic of the alkalinity due to cystitis. The ammonium carbonate is developed in the bladder by fermentation of the urine, which is brought about either by the presence of bacterial organisms or by the formation of a ferment in the bladder. The presence of this volatile alkali is shown by the existence of crystals of ammonio-magnesian phosphate. In addition, the urine will be passed frequently, and its passage will be attended with pain. There will also be in such cases a constant desire to urinate. This man has not had these symptoms.

There is one other point to which it may be well to allude, although it does not strictly come up in this connection: that is, the recognition of pus in the urine from the prostatic portion of the urethra. It seems to me that the most reasonable way of estimating the source of the pus is by separating the urine into two portions, having the patient pass the first portion into one vessel and the remainder into another. If the pus comes from prostatic disease it will be found in the first portion, while the second portion will be free from pus. In other respects the urine of prostatitis has the same general characteristics as the urine of cystitis.

Although a study of this case makes it

probable that the pus originates in the pelvis of the kidney, I am sorry to say that we are unable to detect a definite cause for the pyelitis.

Inflammation of the pelvis of the kidney is in very many cases, perhaps in the majority, due to extension of inflammation from the bladder, and this is brought about by enlarged prostate, by stricture, by cystitis following urethritis, or some inflammation of the lower genito-urinary passages. In other words, it is a secondary affection. Examination of our patient shows that he is entirely free from any of these predisposing causes of pyelitis. It is next most commonly due to some irritation of the pelvis from the presence of a stone. Such collections are usually made up of uric acid or oxalic acid. The best means of determining the presence of such formations is by examining the urine and recognizing the existence of an undue proportion of uric or oxalic acid. These are not present in this case.

Let me refer to the pain of which this patient has complained. He has had a great deal of pain over the lumbar region. Taking into consideration the pain, the emaciation, and fever, together with the fact that two weeks ago I showed a case of abscess of the liver opening in the lumbar region, I thought there was an urgent necessity of examining the hepatic region in order to determine whether or not there was any suppurative process in progress. Abscess of the liver is often latent, and, as in the case I referred to, it may be complicated with cystitis. We eliminated the probability of the pain being due to abscess of the liver by the fact that, under rest and treatment directed to the pyelitis, the pain has almost entirely disappeared, and, further, the liver is apparently perfectly normal, as examined by physical diagnosis. Abscess of the liver would certainly be attended with enlargement of the organ. The pain from pyelitis due to the presence of a stone is very severe and lancinating in character, but at times it will disappear. It will also often be attended with the escape of a little blood, from the irritation of the pelvis by a spicula of the stone. Blood has never been passed by this patient, and there are no signs to make the existence of stone probable.

Pyelitis sometimes occurs in connection with certain blood-poisons, such as the fevers, but he has suffered from none of these. It is sometimes due to pressure upon the ureter by a tumor in the abdominal cavity; but there is no evidence of such a tumor here, nor is there any history of traumatism.

Having considered all the different causes of pyelitis, I am forced to conclude that this is a case of idiopathic character, possibly due to cold, although I am reluctant to admit the influence of cold as a cause of pyelitis.

The treatment is, of course, rather unsatisfactory, since it is difficult to affect this portion of the genito-urinary tract without acting upon the general system. Pyelitis is an extremely obstinate affection, and is apt to cause irritation of the kidney, leading to the formation of what is known as surgical kidney, followed by hectic and general blood-poisoning. The treatment is unsatisfactory because, after pyelitis has continued some time, there is, either from thickening of the pelvis of the kidney or the development of a stone, retention of urine, and pressure is brought to bear upon the kidney, leading to the formation of cystic kidney or causing surgical kidney. The patient is then apt to succumb from general exhaustion.

Where the disease is amenable to treatment, the best results are secured by the use of milk-diet. This gives a small amount of organic matter to be passed out through the kidney, and consequently the urine is non-irritating. That may be put down as the first element of treatment.

The second is to administer such remedies as will produce an alkaline state of the urine. On the whole, I think a combination of phosphate of sodium, bicarbonate of potassium, and some preparation of lithium is best calculated to produce this result. The following may be administered:

℞ Sodii phosphatis, gr. xxx;
Potassii bicarb., ʒj;
Lithii carbonatis, gr. v vel xv. M.

This may be given in a glass of water once or twice a day. It will render the urine alkaline and will not affect the digestion.

In addition to this, it is advisable to employ some preparation intended to act on the pelvis of the kidney as a slight stimulant. The oil of sandalwood has been recommended under these circum-

stances, but I have never derived a great deal of benefit from it. This, however, gives us the line of treatment to be aimed at. Some stimulant diuretic should be administered. The oil of sandalwood or the oleoresin of cubebs may be given. There is another remedy which sometimes seems to have a decided effect upon the mucous membranes: this is boric acid. Boric acid and potassium bromide, in emulsion with oleoresin of cubebs, constitutes an admirable treatment. During convalescence some preparation of iron is to be cautiously used to restore the crasis of the blood. This may be given in the form of Basham's mixture.

In considering this subject there is another matter to be referred to. Is this condition likely to cause abscess around the kidney? Is any direct treatment of the pyelitis possible? Operative treatment in pyelitis—that is, where there has been no stone—is not considered admissible by surgeons; but in these days, when so much is attempted in surgery, if the condition of pyelitis has been caused by a calculus, operative measures have frequently been adopted for the relief of this condition. Persistent pyelitis can produce sufficient irritation in certain cases to develop perinephritic abscess. This should always be remembered as a possible complication. The persistent pain in the back which was complained of in this case led me to examine carefully for the existence of perinephritic abscess, but no signs of this condition were detected.

RHEUMATISM.

I have two cases of rheumatism which I now desire to show you. This first case presents some special features of interest. You observe this peculiar claw-shaped contraction of the hands, which is bilateral. There is also an almost total loss of the electrical reactions in the extensor muscles on both sides. Looking at the joints, we might at first sight think that he was suffering with rheumatoid arthritis, but examination of the joint shows that there is nothing of the kind. A peculiar pear-shaped alteration of the joints of the fingers observed in rheumatoid arthritis is absent. Nor is there the characteristic alteration in the cartilages. The deformity of the hands is due to the excessive action of the flexors of the forearm, as opposed to the extensors, which are atrophied.

Rheumatism is ordinarily considered to be a blood-disease connected with some alteration of the crasis of the blood. This idea is true in so far that there is alteration of the crasis of the blood in rheumatism; but there are certain points which show that rheumatism is a possibly nervous affection, and that the alteration in the blood is a secondary condition. Rheumatism is a disease that comes on suddenly, and often goes away as quickly as it came. Our second patient came in one week ago, with a temperature of 102°, and suffering with pain in the joints, the right arm and the right leg being most markedly involved. To-day he is almost entirely free from pain, and the temperature is normal. In this case the affection appeared suddenly in one or two joints, and has rapidly disappeared under treatment. I shall show you in a few minutes that the treatment is directed more especially to the nervous system. Another fact pointing to the nervous origin of rheumatism is its tendency to fly around from one joint to another. This would not be likely if the disease were a blood-poison. In this man, D., we have a clear history of rheumatism affecting both wrist-joints and associated with this peculiar change in the muscles. In the *American Journal of Medical Sciences* there appeared, a number of years ago, an article on rheumatism as connected with changes in the spine, by Prof. J. K. Mitchell. He had observed that in a number of cases of Pott's disease symptoms of rheumatic inflammation of the joints appeared. Here we have a patient who has not Pott's disease, but he has bilateral atrophy of the muscles, with loss of electrical reactions: such changes as take place in chronic poliomyelitis. Since the affection is bilateral, it seems to me that the only reasonable deduction is that in this patient there has been some condition directly connected with the spine which has been responsible for this atrophy; and, in all probability, the lesion in the spine is responsible for the rheumatic symptoms. Time will not permit me to go extensively into this subject, but I wished to refer to these particular points because they bear so closely on the modern treatment of acute rheumatism.

When we come to treatment, we recog-

nize that we have a disease accompanied with severe pain, with high temperature, and localized inflammation in the joint. The modern treatment of rheumatism, as you well know, consists in the administration of some preparation of salicylic acid. This drug, when successful, relieves all the symptoms. It relieves the pain so speedily that it is evident that it does so through its effect on the nervous system. It lowers the temperature quickly. The high temperature in acute rheumatism, as in many other conditions, is an evidence of disturbance of the nervous system. Fever is, in all probability in the majority of cases, a neurosis. I think that Dr. Wood has abundantly shown that the application of heat directly to the brain, to the heart, and to certain portions of the nervous system is capable of producing all the phenomena of fever, —viz., increased circulation, nervous disturbance, and increased production of heat. The fever of rheumatism is probably quickly relieved because it has this neurosal origin. The physiological action of salicylic acid closely resembles that of quinine: it produces tinnitus in the ears, blindness, and so on. We therefore presume that it acts through the nervous system to subdue pain and lower temperature. It has been found better to combine the acid with an alkali. We give it in connection with sodium or ammonium because we recognize a change in the blood, which also is probably due to the same cause. The assimilative organs are affected by the disturbance of the nervous system, and the blood is therefore loaded with imperfectly-reduced albuminoids. These give rise to the formation of lactic acid and other derivatives of globulin, which are ordinarily eliminated in the form of uric acid and its combinations. Physiologically, these are elaborated into urates of soda and potassium. We therefore give salicylic acid in combination with sodium, ammonium, or potassium, to favor the elimination of these materials as urates. My favorite prescription is the following:

℞ Acidi salicylici, f℥j;
Ammonii carbonatis, gr. 1;
Syrupi et aquæ, q. s. ut ft. ℥ii. M.

This is to be taken in divided doses in the course of twenty-four hours. In this prescription we secure the stimulant effect of the ammonium carbonate and thus obviate the depressing effect of the salicylic acid upon the circulation. If the symptoms are not controlled in thirty-six hours, the amount administered in twenty-four hours may be increased to ninety grains. I never feel safe in going above this amount, but, if unsuccessful, resort to other plans of treatment.

Both these patients have been treated by salicylates. I have, however, another patient in the wards, in whom a good result has been brought about by the administration of twenty drops of oil of gaultheria every two hours for thirty-six hours. The remedy was continued in ten-drop doses every two hours for twenty-four hours longer.

From these considerations I think that we may conclude that the nervous element is the preponderating element, and that the blood-poison is secondary. There are many cases of rheumatism in which the disease is subacute or chronic and is not affected by this treatment. Under such circumstances we may infer that there has been so much accumulation of partially-reduced albuminoids in the blood, so much blood-poisoning, if we may use the term, that the crasis of the blood cannot be restored at once. Recognizing this, I never give salicylic acid without also giving something to render the urine alkaline, for we know that the uric-acid series of products will stand the best chance of being eliminated under such circumstances. For this purpose I give bicarbonate of potassium. This may be given in the form of a lemonade, or the citrate may be given in the same way, or, in the very chronic cases, in the combination of the phosphates with lithium already mentioned in the treatment of pyelitis. As soon as the urine is alkaline, the dose of the alkali should be reduced to such a point as will keep the urine in this condition. An injudicious persistence in the alkaline treatment tends to alter the crasis of the blood, and it is therefore advisable to use the tincture of the chloride of iron or other tonics in case an anæmic condition should supervene. These are the principles of treatment aside from diet, which, it is important to observe, should be of such character as will not supply the albuminoids in too great abundance, and should consist principally of milk, oat-meal, and similar substances. The patients will continue this regimen, and will be brought before you again in order to show you the results.

ORIGINAL COMMUNICATIONS.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,
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THE CASE OF HEINRICH HEINE.

HEINE, the famous German poet and critic, suffered during the later years of his life with a distressing cerebro-spinal disorder, which terminated fatally February 17, 1856. Mauthner has collocated the symptoms of his case, from which it appears that the cerebral affection was what is clinically known as nuclear paralysis. Beneath the floor of the fourth ventricle, about the aqueduct and in the adjoining part of the third ventricle, are a number of nuclei to which the nerves of the eye have been traced. When several of these nuclei become diseased we have the condition generally known as ophthalmoplegia or nuclear paralysis. The clinical history of this condition is well illustrated in this case of Heine, which is given in the form in which Mauthner presents it. The sequence of the symptoms, as will be observed, was as follows: Protracted headache, dating back some fifteen years previous to the first eye-symptoms, which were mydriasis and paralysis of accommodation. About eight years later, paralysis of the muscles of the eyeballs, with ptosis, the fifth pair also being involved. Then paralysis of deglutition, difficulty in breathing, paralysis of the jaw-movements, spinal spasms,—death, some thirty years after the inception of the disease.

In the year 1822, during his residence in Berlin, Heine suffered much from nervous headache, which steadily increased during the succeeding years. In the year 1831 Heine resided in France, and for a few years succeeding this date the headaches seem to have diminished in frequency and severity, as there are fewer references to them in his letters of this period. In autumn of 1837 mydriasis, with accommodation-paralysis, occurred. This disappeared after a time, but again recurred. In January, 1845, paralysis of the eye-muscles followed, so that there was paralysis of all the muscles of the eye, both exterior and interior. In the L. E. there was complete ptosis; in the R. E. partial ptosis. The sensitive parts of the trigeminus were also involved. "I kiss," wrote Heine, "but have no sensation with it, so strongly are my lips paralyzed. Also a part of the palate and tongue are affected, and all that I eat has an earthy taste." A little later: "The parts concerned in speech are so affected that I am unable to speak, and for four months I have been unable to eat, owing to the difficulty in chewing and swallowing and the loss of taste." In the spring of 1847 great difficulty in breathing set in. Finally there was paralysis of the jaw-movements, violent spinal spasms set in, the limbs wasted. The back became bowed, apparently from the muscular atrophy. In May, 1848, the patient was obliged to take to his bed, which he practically never left for the remaining eight years of his life. Dr. Gruby thus refers to his condition in 1849. "I found him destitute of all power of motion,—coiled, as it were, together,—the saliva dribbling from the mouth, and utterly unable to feed himself." Violent fits of suffocation developed in 1854–55. On February 17, 1856, he died during an attack of uncontrollable vomiting, possibly brought on by enormous doses of morphia, which had become necessary to him during the later years of his life. A remarkable feature of the case was that the intellect remained clear and bright through all this terrible sickness.—*Mauthner's Vortraege der Augenheilkunde.*

HEAT AS AN ANTISEPTIC IN OPHTHALMIC PRACTICE.

Birnbacher uses heat as an antiseptic in operating in the following manner. All the bandages that are to be used are placed, four hours before the operation, in a closed leaden box and introduced into an oven. In addition, two glass plates with glass covers, after having been washed with solution of corrosive sublimate and alcohol, are also placed in the oven. The air in the latter is then brought to a temperature of about 150° C. and kept there for two hours, and then gradually allowed to cool. Immediately before the operation the tin box is removed, placed on a glass plate, opened quickly, and covered with one of these glass covers, and kept there until the bandages are needed. All the instruments except those used for cutting-purposes are heated in the flame of a Bunsen burner, and laid on the second glass plate and covered with a glass cover. To allow of the heating, the hook, spoon, spatula, and Treber's loop are made of

platinum, and screwed into the ivory handles. The various forceps have the lower third made of platinum. The various eye-drops (cocaine, eserine, atropine) are also heated, the mouths of the vessels containing them being closed with sterilized cotton. The cutting-instruments are placed in absolute alcohol for an hour preceding the operation. After operation the parts about the eye are washed, first with soap, then with the sublimate solution (one to five thousand). Particular attention is paid to cleansing the edges of the lids.—*Centralblatt für Prakt. Augenheilkunde*, August, 1885.

[It is hardly likely that such a complicated method as described above would be maintained. It consumes too much time; and, furthermore, with the greatest care there could hardly fail to be some loop-hole for the entrance of micro-organisms. Aside from cleanliness, it seems probable that the true basis of antisepsis is that of getting the tissues operated on in such a state that if a micro-organism settles in the wound it will find no favorable soil for growth and propagation; and heat properly applied conduces to this end.]

TUMOR OF THE OPTIC NERVE.

Vossius reports the following case. The patient, a servant-girl, æt. 19, had always seen well with each eye. Four days previous to her application for treatment her friends noticed that the left pupil was larger than the right. For a week she suffered with attacks of epistaxis, especially marked during the menstrual period. There was no history of syphilis. At the time of application there was no swelling or redness about the eyelids. The left eyeball was exophthalmic, and rotated downward and outward. The pupil was dilated (*übermittelweit*), did not react to incident light, but to accommodative effort and also to incident light on the other eye there was a slight reaction. The vision was eccentric; fingers counted at eight feet. There was choked disk; very much enlarged, tortuous veins, the tortuosity reaching to the periphery of the fundus. The retinal arteries were extremely narrow. The patient was kept under observation several weeks, during which the vision steadily decreased; the choked disk passed into the stage of atrophy. A year later the eye was completely amaurotic, the exophthalmos was greater. The eyeball with a tumor posterior to it was at this time removed. The tumor proved to be a myxo-sarcoma, extending from the scleral end of the optic nerve to the optic foramen. It was thirty-seven millimetres in length. The outer sheath of the nerve was intact, the inner sheath, the intervaginal tissue, and the interstitial tissue of the optic nerve, but especially the first, being involved in the abnormal process. The optic-nerve fibres, for the most part, were completely disintegrated or atrophied. In other places intact fibres could be traced. Macroscopically, no signs of the nerve-trunk could be detected in the longitudinal section of the tumor.—*Berlin. Klin. Wochenschrift*, March 30, 1885.

COCAINE-INTOXICATION.

Mayerhausen reports the following case of cocaine-intoxication from a collyrium. The patient was a girl, æt. 12, who had injured one cornea by a steel pen. The injury had been followed by a deep discoloration of the cornea. To enable this discoloration to be scratched away, the eye was put under the influence of cocaine by dropping four times, at intervals of about five minutes, one or two drops of a two-per-cent. solution of cocaine (Merck's). During the operation about every five minutes the solution was used, so that about fifteen drops altogether were instilled. Immediately after rising from the operation-table the patient complained of headache, considerable nausea, but no vomiting. There was anorexia for the rest of the day, listlessness, unsteady gait, dulness of mind. These symptoms gradually subsided, it being something more than twenty-four hours before they completely disappeared.—*Klinische Monatsblätter*, June, 1885.

STATISTICS OF ATROPINE-POISONING.

Feddersen (Diss. Inaug., Berlin, 1885) says that there are one hundred and three cases of poisoning from atropine on record, twelve of which were followed by death. Undoubtedly many unrecorded cases have occurred. Of these one hundred and three cases (to which Feddersen adds one of his own, brought about by an atropine salve and followed by recovery), ninety-eight were from prescriptions ordered for internal use, fifty-three from collyria. In nine cases it was given to destroy life (*giftmord*); in ten it was taken with suicidal

intent; eighty-four were accidental. In the cases due to collyria the strength of the solution varied from .17 to three per cent. —*Centralblatt für Augenheilkunde.*

[Hirshberg comments thus on the above: "I have never yet seen a case of atropine-poisoning from the use of collyria." The reviewer has seen decided reddening of the skin ensue, with the milder symptoms of atropine-action, after the use of what purported to be a four-grain solution of atropia. The solution had just been prepared, and it was supposed that the symptoms were due to some susceptibility of the patient. The solution was used once more in another case, and analogous symptoms were developed, possibly not so decided. In neither of these cases were the symptoms toxic, as they required no treatment, but the general symptoms were marked. There can be little doubt but that a stronger solution than gr. iv to f℥j had been inadvertently dispensed.—H.]

VESICLE OF THE CORNEA.

Dimmer describes the following case. The patient—a woman, æt. 30—had received, nine days before applying for treatment, an injury to the left eye from lime. At the time of application for treatment the left cornea was superficially, but over its whole surface, clouded. There was ciliary and conjunctival injection. Atropine was applied and the eye bandaged. Two days later the patient presented herself. The cornea was found to be covered with a large vesicle filled with bloody serum. Instances of the formation of vesicles after burns are on record, but they are rare. A case of Mayerhausen's in which the vesicle was filled with blood, and also a similar one described by Schmidt Rimpler, seem to belong to this category. —*Klinische Monatsblätter*, July, 1885.

PERIODICALLY-RECURRING OCULO-MOTOR PARALYSIS.

P. J. Möbius reports the following: A child, æt. 6, had five attacks of total oculomotor paralysis of the right eye. The attacks occurred at intervals of a year; began with continuous vomiting and violent pains about the eye; lasted, as a rule, eight to ten weeks, when the paralytic symptoms, with the exception of the mydriasis, disappeared. The vomiting before the occurrence of the paralysis lasted eight days, the violent eye-pain fourteen days. The author thinks the cause to be a palpable lesion, which underwent periodical tissue-change. If located near the oculomotor nucleus the violent eye-pain would be accounted for, as the origin of the descending root of the fifth is near this point. —*Centralblatt für die Med. Wissenschaft.*, 1885, No. 5.

INFLUENCE OF CONCAVE GLASSES AND AXIS CONVERGENCE ON THE PROGRESSION OF MYOPIA.

Förster refers to the well-known connection between continuous use of the eyes at a short object-distance and the progression of myopia. Two hypotheses exist:

1. The tensor hypothesis, in which the contraction of the tensor choroideæ is supposed to be the cause of the progression.

2. The convergence hypothesis, in which the increased convergence is the cause.

Förster discards the first, for the form of the eyeball depends on the sclera, and how can the tensor choroideæ induce any change in its shape? Further, were the tensor at fault the myopia would cease after a time to progress, but this does not always happen. All these contradictions cease when we turn to other hypotheses. Förster has observed often that myopics who have worn from youth up pure fully-correcting or even over-correcting glasses never have felt it necessary to change their glasses. This is again contrary to the tensor hypothesis.

The true method, then, of treating myopia is the use of means to prevent too strong convergence, such as the constant wearing of concave glasses. In high grades the use of not fully-correcting glasses is often permissible, but they must be combined with abducting prisms.—*Centralblatt für die Med. Wissenschaft.*, 1885, No. 13.

Dr. W. W. Seely contributes the following upon this subject. Dobrowolsky having asserted that in cases where there is no binocular vision there is no effort at convergence, Seely combats this with the following case. A young lady had a strong divergent strabismus due to a large corneal macula. The other eye was slightly hypermetropic. In spite of efforts at correction, the patient still complained of difficulty in the use of the eyes. For cosmetic purposes, the corneal cloud was tattooed and the right internus advanced. After the operation the patient could read without sense of weariness, and also did not require the correcting-glass for the other eye. In this

case there was absence of binocular vision, and yet the patient was constantly making effort at convergence. Hence the loss of the binocular vision does not indicate that the convergence-instinct has also disappeared. Further, many cases of progressive myopia can only be prevented from advancing by the aid of prismatic glasses. The *rationale* of the treatment of such cases is to aid the diminished convergence-power, which is the main cause of the increased accommodation-effort.—*Klinische Monatsblätter*, June, 1885.

REFRACTION OF THE HUMAN EYE.

Dr. B. A. Randall contributes a critical study based upon the examinations made by different authors, especially among school-children. The various results are tabulated, and thus made of great use to any one interested in this subject.

The following inferences are deduced from them by Dr. Randall:

1. Myopia is almost unknown in infancy, and very infrequent before the period of school-life.

2. Hypermetropia is the enormously-preponderating condition in infancy and early childhood.

3. Astigmatism has been rarely sought with care, and the present data afford no definite conclusions.

4. Emmetropia, in a mathematically-strict sense, has probably no existence.

5. The question of what is normal refraction of the human eye is still an open one.

SOME PRACTICAL SUGGESTIONS IN ELECTRO-DIAGNOSIS AND TREATMENT.

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IN the diagnosis and treatment of nervous diseases both a galvanic and a faradic battery are indispensable, and the advice given to students to employ only a faradic battery, as if it answered all purposes, is incorrect and absurd. Both currents are necessary to give one an intelligent opinion of the condition of paralyzed muscles and nerves. In all cases of paralysis an examination is incomplete—more than that, very imperfect—unless you have obtained the electrical condition of the paralyzed parts. In examining a muscle or nerve, place either one of the poles at an indifferent point, over either the sternum or the spine; the former position being preferred, as the patient can hold the electrode in place. If examining a nerve, the other electrode is placed over the nerve at a point where it is most superficial; if a muscle, over its motor point,—the point where the nerve supplying the muscle is supposed to enter,—then note the strength of current required to produce a slight contraction. When it is desired to reverse the poles, as is necessary in the galvanic current, a mechanical contrivance called a commutator or pole-changer is used, which does away with the necessity of lifting the electrodes. This method of examination applies to both currents. Given a case of paralysis, you wish to supplement your examination with an electrical condition of the parts. First examine all paralyzed muscles and nerves with the faradic current, placing the electrodes as previously mentioned. Then ascertain the strength of current required to produce a minimum contraction, and thus you compare the various muscles paralyzed, recording the result for future reference. In most faradic machines the cathode or negative pole is the stronger, and should generally be applied to the diseased parts. If there be no response to the faradic current, the galvanic should be used, applying one pole to an indifferent point, the other over the nerve or muscle, opening and closing the current by an electrode having an interrupting handle,—the preferable way above all other fancy contrivances,—and noting the strength of the current needed to produce a minimum contraction, then compare the degree of contraction of the different poles. When there is normal faradic response there is also an accompanying normal galvanic response, which gives the following formula when the current is opened and closed and the poles reversed,—that is, placing one pole, the anode or positive, on the sternum, the cathode or negative over the nerve, and noting the degree of contraction from a minimum current; then reverse the poles, which places the cathode on the sternum and the anode on the nerve, and interrupting the current: cacc>anoc>ancc>caoc. Examining a healthy muscle in a similar way, the formula is: cacc>ancc>anoc>caoc.

These are the normal muscle- and nerve-reactions to the galvanic current, and almost always can be obtained when the

faradic response is normal or nearly so. But where there is no response to the faradic current there is generally a response to the galvanic, giving a reversal of the normal formula. When a nerve is examined we have: ancc>cacc>anoc>caoc. If the muscle, we have: ancc>cacc>anoc>caoc. The opening contractions are rarely obtained, as the strength of current required is too painful. These formulæ show a condition of partial degeneration, and are called by Erb the reactions of degeneration. One will not always find the order here stated, as sometimes in the muscle-formula we have ancc = cacc, or in the nerve ancc = cacc, both showing a lesser degree of degeneration; but in most cases where the faradic response is absent, there are generally the reactions of degeneration, or there is no response to either current.

There is a prevalent opinion among medical men that if in cases of paralysis one obtains a fair farado-muscular contractility it excludes the spinal cord as the seat of the disease, and places it in the brain. This is a mistake, as certain spinal-cord diseases —*e.g.*, primary lateral sclerosis—give a normal faradic response, or even exaggerated reaction. In all paralyses due to diseases of the brain the electrical reactions are only quantitatively changed, either slightly lessened or exaggerated, but never wholly lost. Even in cases of years' standing there is some response to both currents. Diseases of the spinal cord involving the trophic centres, such as infantile and adult spinal paralysis and acute muscular atrophy, having the seat of their lesions in the anterior horns of the gray matter, usually give in recent cases diminished or lost faradic response, in older cases completely lost faradic response, and either no response to galvanism or the reactions of degeneration. This is especially the case in infantile and adult spinal paralysis and peripheral palsy. In recent cases of infantile paralysis involving the lower limbs I have found that the anterior tibial group of muscles, especially the anterior tibial muscle, was the first to lose faradic contractility. In fact, in all cases of infantile paralysis of the lower limbs either the anterior tibial or extensor communis digitorum muscle is implicated. In acute muscular atrophy, as long as some muscular fibre is left an electrical response is obtained; in advanced cases there is no reaction. In all other spinal-cord diseases, as lateral-column sclerosis (spastic spinal paraplegia), secondary degeneration of the same columns following disease of the brain in the motor tract, post-spinal sclerosis (locomotor ataxia), spinal meningitis, and in the earlier stages of diffused myelitis, there is either normal, slightly diminished, or exaggerated electrical response. If in these diseases you have added atrophy and lost faradic response, then the spinal lesion has encroached on the gray matter of the anterior horns. So it is well to remember, if in long-standing paralysis you obtain fair electrical response to both currents, the seat of the disease is either cerebral or in the lateral or posterior columns of the cord. When there is no faradic response, and the galvanic current shows the degeneration reactions, the cause must be either peripheral or in certain parts of the spinal cord,—the gray matter of the anterior horns.

Let us suppose a case (as Dr. Amidon has in his excellent little work on electro-therapeutics) of paralysis of the extensors of the wrist of several months' standing. The electrodes of the faradic battery are applied, one on the sternum, the other over the musculo-spiral nerve as it winds around the humerus. If normal response is obtained, you must have one of three conditions: either paralysis of cerebral or hysterical origin, or the subject is feigning. If the reactions are exaggerated, it is more likely to be due to cerebral disease. If the farado-contractility is slightly diminished, then it is probably a non-destructive spinal or peripheral lesion. When there is no response to the faradic current, however strong, there must be a destructive lesion in the motor cells of the anterior gray horns, or the musculo-spiral nerve is itself diseased. The same remarks apply to the application of the faradic current to the muscles supplied by this nerve. When the reaction to the faradic current is lost to the galvanic current you generally obtain a perversion of the normal formula, or the reactions of degeneration: that is, instead of having in the nerve cacc> anoc>ancc>caoc, you have anoc>cacc >anoc>cacc. In the muscle, instead of having the normal muscle formula, cacc> ancc>anoc>caoc, you have ancc>cacc >anoc>caoc. This condition shows that the paralysis is either due to a destructive lesion in the motor-spinal cells of the anterior gray horns, or the nerve itself is

degenerated. In the latter electrical condition the diagnosis must be either lead-palsy, antero-poliomyelitis, or injury to the peripheral nerve by compression, etc.; the further history of the case generally aids you in making your decision. When no response is obtained to either current, the causes remain the same, only existing in a greater degree, leading to complete destruction of the spinal or peripheral motor tract.

The electrical condition of individual diseases may be tersely stated as follows. In locomotor ataxia there is normal farado-contractility, with markedly diminished electro-sensibility, especially of the lower third of the inferior limbs. In spastic spinal paralysis there is normal or exaggerated farado-contractility, with normal electro-sensibility. In infantile spinal and adult spinal paralysis, in recent cases greatly diminished or lost farado-contractility; in older cases lost farado-contractility and the reactions of degeneration appear; or, in very old cases, there is no response to either current. In children the two diseases, infantile spinal paralysis and spastic spinal paralysis, at a glance seem very much alike, and often reputable medical men mistake the latter for the former. The electrical reactions will unerringly guide you. In infantile paralysis (antero-poliomyelitis) there is no faradic contractility, but you have the reactions of degeneration or no response to either current. In spinal spastic paralysis (acquired, congenital, or secondary sclerosis of the lateral columns of the cord) there is slightly exaggerated reaction to both currents, with heightened patellar reflex. This differential diagnosis is very important, as the two diseases require different treatment. In progressive muscular atrophy there is faradic contractility as long as any muscular fibres remain; but when they reach a certain stage of degeneration the response to the galvanic current gives the reactions of degeneration. In other diseases of the cord, such as inflammation of the membrane or the cord proper, hemorrhage, concussion, injury, compression, etc., the electrical reactions remain normal or exaggerated unless the motor cells of the anterior gray horns are involved or the peripheral nerves as they leave the cord are compressed or severed. In the latter case there will be, after a time, degeneration reactions or complete loss of electrical irritability. Peripheral palsies, such as are due to compression, contusion, rheumatism, etc., in the beginning present only slightly diminished farado-contractility; later, lost faradic contractility; and if no improvement sets in, the degeneration reactions appear, or all electrical response is lost.

In examining for electro-sensibility, the metallic brush is used with the rapidly-interrupted faradic current. In the treatment of paralysis by electricity only a few general principles can be given. When muscles and nerves respond fairly to the faradic current, apply this form with slow interruptions. Séances of five minutes' duration should be given three times a week, at the same time observing that each muscle should be gently contracted a dozen times or more. Above all, avoid currents which produce violent contractions, or harm is liable to follow. In such cases, having heightened electrical irritability with increased tendon reflex, use electricity sparingly to the muscles. In those diseases where no faradic response is obtained, use the interrupted galvanic current, applying the pole to the muscle giving the greater contraction to the minimum current. In long-standing cases, where the muscles and nerves refuse to respond to either current, the prognosis is unfavorable. I have given such cases patient trials with electricity, and have not accomplished any good. All forms of acute paralysis should be of four to six weeks' standing before any electrical treatment should be instituted. Never overtreat paralyzed limbs by electricity. A good rule which I use was suggested to me by an accident. A man was struck on the shoulder, contusing the circumflex nerve and causing paralysis and atrophy of the deltoid muscle. When I first saw him the muscle gave the reactions of degeneration. I applied for many months the interrupted galvanic current without any improvement. He was suddenly called away, and had to remain without treatment for three months. On his return I found the deltoid muscle nearly restored, the shoulder having its natural rotundity, and a fair faradic response was obtained. My plan is to apply the current about two months; then let the parts rest one month, in which time the patient is to carry out massage; then begin another two months of treatment, followed by a month of rest.

Cases thus treated do much better than those treated continuously for many months without any interruption.

In conclusion, I wish to state that cases of infantile paralysis (antero-poliomyelitis) which present the reactions of degeneration *are* benefited by persistent electrical treatment. I have at present two cases in which, after a year or more of careful attention, I have had good results. If, in old cases presenting these reactions, you have no improvement after eighteen months' treatment, it is probably useless to try any further.

1531 North Seventeenth Street.

"A SEA CHANGE."

BY HORATIO R. STORER, M.D.,

President of the Newport Medical Society, and one of the consulting Surgeons of the Newport Hospital; Ex Vice-President of the American Medical Association.

IT is known to many of the profession that, since returning from the last five of thus far nearly eight years in Europe, I have been studying the adaptability of Newport, Rhode Island, as a general health-station for invalids, similar to those abroad which are recognized as such by American as well as by foreign physicians. Evidence upon this subject I foreshadowed in the *Virginia Medical Monthly* for April, 1879, and have already given in the *Sanitarian* (New York) for January 11, 18, and 25, and February 8, 1883, the *Boston Medical and Surgical Journal* for March 22 and 26, and the *New York Medical Record* for December 22 of the same year. In accordance, however, with a restriction that I had placed upon myself three years previously to the last of these dates, in 1880, I have refrained till now from any decided action towards developing in a professional direction the remarkable hygienic influences of the island.

At the time mentioned I stated, in a communication to the American Public Health Association, that, "though the natural conditions of the place are favorable for health and longevity, I should decline to recommend it (for delicate persons) until there existed a proper system of sewerage; until the soil-water (raised by an artificial public supply) was reduced to at least its natural level; until there were hydrants for fire and general sanitary purposes; until the old cesspools were filled in or removed; until the real estate agents furnished evidence that the houses they offer to strangers are safe to live in; and, over and above all, until there was a board of health-officials who would care for these and other sanitary matters systematically" ("Transactions of the American Public Health Association," vol. vi. p. 216).

During the intervening period the measures thus indicated as essentials have been almost all attained. Newport has now an efficient Board of Health, three members of which are physicians. It has adopted a general plan of sewerage, the main features of which are being rapidly carried out. In proportion as this is done, the level of the ground-water is being lowered and damp cellars made dry. Public hydrants are everywhere. The cesspools and privy-vaults are disappearing. One of the leading real estate firms refuses to lease houses of the better class unless possessing the certificate of the Sanitary Protection Association; and, most recent of all, a mayor and city government have just been elected who are in sympathy with the advances insisted upon by the Association named and by the Newport Medical Society.

Being accordingly free again to express my candid opinion regarding the intrinsic hygienic features of this "American Isle of Wight," I have no hesitation in saying to my medical friends, and the profession generally, that it is worth their while to investigate, personally, if possible, the advantages of Newport as the temporary or prolonged residence of invalids (both medical and surgical, even "hopeless" cases) and convalescents. In doing this I am not merely seeking a selfish end, for, having been appointed by the American Medical Association at its session at St. Louis in 1873 to investigate European health-stations in their relations to American invalids (my report having been rendered at the session in Louisville in 1875), I have felt since my return, a convalescent myself, that, in accordance with the true spirit of my instructions, I am now but pursuing their general subject still further. I will say, in addition, that there are a number of other physicians resident in Newport, members of its Medical Society and personal friends of my own, to whom I shall as gladly see patients from a distance intrusted as though they were sent to my own care. It is needless to add that immediate members of the families of physicians, as always hitherto, will be wel-

come to our best services without professional charge. Good board can be obtained at Newport outside the fashionable season, say from September to July, inclusive, at from six to twenty dollars per week.

The conditions at Newport may be thus briefly stated. Its climate is distinctly insular, to a great extent oceanic, being materially affected by the Gulf Stream, and milder than that of the coast-line, even where this is but a very few miles distant. The seasons are markedly prolonged into each other. The atmosphere, though moist, is decidedly saline. Rheumatism and the various nervous hyperasthenias are rare as here originating, and when brought are almost always relieved. Pneumonia, and even phthisis, save as here for treatment, are exceptional. The winters are comparatively mild, and though snow and ice are of course present for portions of each winter, it is to a much less extent and for a shorter period than upon the mainland. There are many patients who could be made comfortable here during winter who are now carried South, to their own inconvenience and that of their friends, or remain at home in much less favorable local climates.

I can only add that, should chronic cases of any kind, or convalescents, be confided to my charge, I will endeavor to carry out the wishes of the medical men to whom I may owe them. To accomplish this the more satisfactorily, I have associated with myself in practice Dr. W. Thornton Parker (Munich), late Acting Assistant-Surgeon, U.S.A., and together we shall do what we can to make Newport generally recognized, aside from all its social attractions, as a valuable therapeutic aid to the American medical profession.

NOTES OF HOSPITAL PRACTICE.

JEFFERSON MEDICAL COLLEGE HOSPITAL.

CLINIC OF JOHN H. BRINTON, M.D.,

Professor of Clinical Surgery, Jefferson Medical College.

EXCISION OF THE SCAPULA FOR SARCOMA.

GENTLEMEN,—The specimen which I present for your inspection is that of a tumor taken from a girl 11 years of age, upon whom you saw me operate at our last clinic. The growth involved the entire right scapula, and was the result of an injury received two years ago. At that time the child fell down a slope about seven feet, striking her scapula upon a projecting stone. There was a little temporary pain, but in an hour this had passed away, and the incident was forgotten. In April of this year she complained of some tenderness over the back of the shoulder, and about May a lump or swelling was noticed by the parents. This grew rapidly in size until, as I showed you at the last clinic, it measured fifteen inches in diameter and the shoulder was very prominent. The scapula also seemed to be thrust away from the side of the chest, and a hard lobulated mass could be felt deep in the axilla. With these local changes the constitutional condition of the child sympathized to a marked degree. The pain at times was very great, occurring at intervals during the day, and more constantly at night. Sleep became almost impossible, and of late could only be obtained by the free use of opiates. The child was evidently going down rapidly; the persistent suffering, the loss of rest, and the poisonous impression of the growth were wearing her out. There was no hope for her, save in an operation for the removal of the mass. After due consultation and reflection, I determined to attempt the extirpation of the growth, having first plainly set before the parents and the grandfather of the child the great peril of such an operation, and having explained to them the possibility of a speedily fatal result.

I accordingly excised the entire scapula in your presence four days ago. I then drew your attention to the care and caution employed in the administration of the ether, and to the efforts made, and successfully made, to prevent bleeding. So efficient were the exertions in this direction that, as you noticed, very little hemorrhage occurred. I do not think more than four or five ounces of blood were lost, the vessels having been perfectly temporarily constricted before being divided and tied. The command of the subclavian was also absolute. Yet, with all these precautions, the patient died about an hour after the completion of the operation. She had previously emerged from the influence of the anæsthetic, and had spoken rationally, and answered questions. The action of the heart, however, suddenly flagged, and death occurred despite active stimulation

and hypodermic medication. The death was one from surgical shock, and could not have been prevented.

Here is the growth: it is a lobulated, sarcomatous mass, involving the infraspinatus and subscapular fossæ, stretching but not infiltrating the muscles; the indurated axillary mass is a part of the subscapular growth. The overlying skin is healthy.

You are not likely to see many such cases,—this being only the second excision of the entire scapula for disease done in this city, to the best of my knowledge.

GONORRHŒAL EPIDIDYMITIS.

I brought a man before you at our last clinic suffering with gonorrhœal orchitis, and then told you that the term orchitis was not to be taken in the strict sense as inflammation of the testicle, for in many cases the epididymis only is involved. I now present to you James F., 26 years of age, with an enlarged testicle following an attack of gonorrhœa, who has epididymitis, not orchitis. This is very likely to occur in cases of gonorrhœa, and you find upon examining the testicle in such cases that the swelling is at first confined to the epididymis, involving the globus major or minor, or both, and you will detect a crescentic mass of induration (due to the inflamed epididymis), and in the cup-shaped depression rests the testicle. Subsequently the testicle may become inflamed, or an effusion occur into the tunica vaginalis, giving rise to great pain and hardness.

It is a fact worth noting that the pain is not necessarily felt in the testicle. This man complains of pain in his back, in the groin along the spermatic cord, and extending along the branches of the genito-crural nerve down the thigh, even down to the leg,—rather than in the testicle itself.

How shall you treat this affection? If a case of acute epididymitis come to you for treatment, you should direct the patient to lie down upon his back with the scrotum elevated, so as to drain the venous blood away; and cold applications of lead-water and laudanum may be made to the inflamed organ,—or they may be tepid if the patient cannot bear the cold. If the bowels are not open, give the man a dose of salts, Epsom or Rochelle, a teaspoonful each morning. If the pains are severe, opium may also be given; and if the inflammation is very marked, two or three ounces of blood may be taken by leeches. I know that it is said that leeches should not be applied to the scrotum, on account of the ecchymosis which they cause; but in such cases looks are of less importance than prompt relief. The lead-water will have to be washed off before the leeches will take hold. After the acute symptoms have passed, I am in the habit of applying mercurial ointment upon a piece of lint, with which the extract of belladonna may be incorporated in proportions up to one-half that of the mercury. This is to be applied fresh every morning; before doing which the scrotum is to be carefully washed off with warm water and soap, to get off the old ointment. Under this treatment the patient will usually get well in about two weeks, but there will generally remain a tell-tale button of induration in the globus minor. When you find this significant little witness, you need not test the patient's veracity too greatly by asking if he ever had gonorrhœa and an inflamed testicle.

The treatment of epididymitis, then, may be summed up as rest, support for the testicle, saline purgatives, leeches, and anodyne applications of lead-water and laudanum, with morphine internally if necessary. The diet should be restricted.

CASES OF EXOSTOSIS.

From this boy, at the last clinic, I excised a small ivory exostosis from the frontal bone over the right orbit. You remember that I had some difficulty in removing it, on account of its hardness; but I finally did so with a saw, and smoothed the surface with a rasp. Corrosive-sublimate (1–1000) dressings were applied, and the wound healed without suppuration. He is now well.

Here is a man from whom I removed an enchondromatous growth attached to the tendinous and fibrous structures of the first phalanx of the ring-finger, of slow development. I took away, from an incision along the palmar surface of the phalanx, a large quantity of loose material, and necessarily inflicted considerable injury. The wound was washed out with corrosive-sublimate solution, and the hand put upon a splint. There was no marked inflammation, and the motion in the neighboring joint is

good. Here is an important point: in all operations in the neighborhood of joints, you should insist upon early passive motion; otherwise you may get a stiff joint. Keep the joint in motion, in order to preserve its function.

ENCYSTED HYDROCELE OF THE CORD.

This infant, 4 months old, has an accumulation of fluid in the pouch of peritoneum which accompanied the testicle down into the scrotum, and which has had its canal obliterated above and below this point. The swelling was noticed shortly after birth, and has since increased in size.

This condition does not require much treatment. Cold applications of chloride of ammonium solution or of lead-water will favor its absorption; or it may be got rid of more rapidly by a few punctures with the needle. The irritation of the punctures will be sufficient to excite inflammation, and obliteration of the sac will perhaps follow.

INJURY OF ELBOW-JOINT BY A FALL.

This girl, 12 years of age, fell four weeks ago, and was supposed to have received a dislocation of the elbow-joint. The question is, Did she receive a dislocation? I have not yet examined it. Let me say that these cases require careful diagnosis. I will never risk my reputation by pronouncing upon a case like this without examining the patient under ether.

Is the head of the radius in its proper position? Many do not know how to find the head of the radius. Let me show you how to do it. In a normal arm, if you flex the elbow-joint, you can find the external condyle; then, by extending the forearm, you notice a pit or depression just below the condyle, marking the position of the head of the radius. Grasp the joint so that your thumb rests upon the external condyle, and then, flexing the forearm, let the thumb slip down into the depression, where it will detect the rotation beneath it of the head of the radius when the hand is pronated and supinated.

Applying the test here (the patient being anæsthetized), I find the head of the radius in position, and it rotates as I pronate the hand. I find some crepitation, due to adhesions which have formed during these four weeks. The motions of extreme flexion and extension are resisted by these adhesions in the joint, but there is no evidence of dislocation or of fracture involving the joint. This passive motion must be practised daily as soon as the effects of this manipulation shall have subsided under applications of lead-water and laudanum. The joint will be liable to be stiff for some time, and to prevent this she shall employ passive movements, massage, and exercise, such as carrying a coal-scuttle up and down stairs and boring holes in a piece of pine wood with a gimlet, every day.

CASES OF NECROSIS.

[Three cases of necrosis were shown, which did not require special comment or immediate operation.—Rep.]

FISTULA OF THE ANUS.

Mr. S., 42 years of age, comes before us for treatment for fistula. I would define a fistula as a sinuous channel connecting internally with the cavity of the bowel and externally with the skin. Ordinarily commencing with ulceration of the mucous membrane in one of the pouches of the rectum, just within the sphincter ani muscle (which acts like the purse-string to a bag), the ulceration penetrates the submucous tissue and allows fluids to burrow downward through or by the side of the sphincter muscle. An abscess is thus formed which points externally, bursts, or is incised, and so remains permanently open. Several sinuses may thus be created, or the pus may travel upward and make a secondary opening into the rectum. In other cases, as the result of a kick, or a fall, or a blow, or from some other cause, an abscess may arise in the cellular tissue around the anus, and discharge itself externally, or internally into the rectum, or both.

Now, as to treatment, be careful to find the true or original internal opening. First introduce a flat-handled probe, such as this of Sir Benjamin Brodie, through both openings, with the aid of a finger introduced into the rectum. Remember, the internal opening is most usually just above the sphincter; if there is another one higher up, it is secondary. Follow the probe with a grooved director, the extremity of which is then brought outside the anus; the overlying ring of tissue is then cut by a bistoury along the grooved director, and the old fistulous track scraped with the handle of

the knife in order to remove the old, unhealthy granulations.

[Having performed the operation upon the patient, a compress dipped in carbolized oil was applied, covered with a towel, and the whole kept in place with a T-bandage.—Rep.]

SCIRRHUS OF MAMMARY GLAND.

Mrs. Mary R., 45 years of age, comes from Delaware for an operation, and gives the following history. She menstruated at fourteen years of age, was married at twenty-five years, and has had two children. In the spring of 1881 her attention was first drawn to her right breast by shooting pains. Shortly afterwards she noticed a hard lump just above the nipple, which up to this time had been normal, and neither of the nipples had presented any signs of skin-disease. Afterwards the nipple became retracted and enlarged. Since April of this year the tumor has grown very rapidly, and has been more painful, more so at night than during the day, and worse during a storm. Now the breast is hard, lobulated, the superficial areolar glands are enlarged, the nipple is retracted, enlarged, and resembles a ripe strawberry. From around its ulcerated base exudes an offensive discharge. The patient's general health is good. The gland is beginning to be attached to the overlying skin. Some enlarged glands are found in the axilla.

Scirrhus is the form of carcinoma most frequently encountered in advanced life, and in married women the mammary gland is the most common site.

In this case nothing can be done except extirpation of the breast, which shall be removed with the overlying skin, the whole gland being included in two curvilinear incisions.

The instruments employed have been disinfected by immersion in a carbolic-acid solution, and the hands of the surgeon and his assistants are also washed, just prior to the operation, in a solution of corrosive sublimate.

[The operation was performed, and the diseased gland and axillary lymphatics removed, care being exercised to take out every indurated gland which could be detected in the axilla. A compress wet with corrosive sublimate was applied over the wound, after its edges had been approximated with the interrupted suture, and powdered with iodoform.—Rep.]

TRANSLATIONS.

Bromhydrate of Quinine.—Among the various preparations of quinine the bromhydrate has some characters which deserve special attention. It contains from seventy-five to seventy-six per cent. of quinine in a purer state than that entering into the sulphate; it is soluble in sixty parts of water; the solution is acid, and clear, but after a few days presents a greenish tint. Dr. Maximowitsch (*St. Petersburger Med. Woch.*, 1884) finds its sedative action of special value in fevers, and has employed it in acute pneumonia, typhoid fever, scarlatina, variola, phthisis, etc. After a hypodermic injection of from .60 to .90 (gr. x to xv), or one dose of from .60 to 1.20 (gr. x to xx) by the mouth, the temperature falls in grave cases from 0.4° to 0.8° (C.), and in light cases from 1° to 1.5° (C.), and the pulse is retarded 10 to 30 pulsations per minute. This improvement persists several hours, then the temperature increases again, while the pulse remains slow for two or three hours more. The patient becomes calm, sleeps quietly, and the delirium ceases.

In phthisis the bromhydrate of quinine has shown itself to be a useful antipyretic, especially when the patient cannot bear narcotics.

Its action in intermittents is like that of other salts of quinine, but it is especially valuable in malarial neuralgias. In one case of quotidian intermittent it proved efficacious in curing the patient, after the failure of sulphate of quinine and Fowler's solution. In cerebro-cardiac neuropathy and neurasthenia it was also used with success. Where anæmia is marked, it may be combined with the bromide of iron.—*La France Médicale.*

A New Therapeutic Method: Dielectrolysis.—At the meeting of the Academy of Medicine (Paris, September 22), Dr. A. Brondel read a communication with regard to the introduction of remedies into the system by means of electricity. The method is based upon the principle that if a current is made to pass through a saline solution the metal will go to the negative pole, and the metalloid, in certain salts, or the acid, goes to the positive pole. The salt is decomposed. It is this that Dr. Brondel has succeeded in conducting

through the animal organism, and to which he gives the name of dielectrolysis.

For iodine, which is easily dielectrolyzable, he applies upon the surface of the body a sheet of amadou wet in a solution of iodide of potassium, and above this sheet he places the negative pole of a pile, of which the positive is placed upon some other part of the body: the iodine then separates from the potassium at the negative pole and travels across the tissues towards the positive pole, where it soon appears, as is shown by a starch test-paper. This is a hypodermic method of medication without breaking the skin, and without pain.

Quite a number of simple bodies may be made to traverse the tissues in this way, and the applications of the new method may be very numerous and very important. Dr. Brondel claims to have thus cured uterine fibromata, a case of perimetritis, a rheumatic neuralgia of the ovaries, and several cases of chronic rheumatism.

Later investigations suggest applications to other diseased states: to parasitic and malignant tumors, skin-diseases, syphilis, neuralgia, etc., and especially pulmonary phthisis, where Dr. Brondel intends trying the action of different mineral antiseptics, such as arsenic, mercury, fluorine, which dielectrolysis will permit to penetrate the pulmonary tissue.—*La France Médicale.*

[This method of treatment can scarcely be considered novel. Priestley and others in the last century made experiments upon the electrolytic conduction of medicines through animal tissues, which were subsequently revised and extended by Klencke (1845), Hassenstein (1853), and Clemens (1860). Beer, of Vienna, in 1869, called especial attention to the electrolytic conduction of iodine in the manner above stated; but experiments made by Von Ziemssen, Brückner, and others proved the erroneousness of these views and the impossibility of obtaining the desired effects, owing to the resistance offered by the skin, and because it was found impracticable to conduct the iodine to great depths through complex animal tissues. The cataphoric effect obtained in Munk's experiments upon the galvanic introduction of different fluids into the uninjured human and animal organism, however, deserves more serious attention. Consult Ziemssen's "Hand-Book of General Therapeutics," vol. ii. page 388 *et seq.*—Ed.]

The Etiology of Tabes Dorsalis.—Dr. Belugon, in a communication to *Le Progrès Médical*, entitled "Recherches sur les Causes de l'Ataxie locomotrice progressive," concludes that:

1. No cause can be invoked as possessing the exclusive monopoly, or as being an element necessary to the production, of locomotor ataxia.

2. The etiological elements which seem to have the greatest importance in the pathogenesis are syphilis, nervous heredity, rheumatism, and functional abuse.

3. In nearly all of the cases, besides the other etiological circumstances, functional excess and nervous over-strain play an accessory *rôle*, and contribute in a more or less marked manner to the evolution of the disease.

4. The etiology of tabes may be formulated in the great majority of cases thus: In an individual possessing a nervous temperament, whether hereditary or acquired by functional abuse, or (as almost always happens) the first exaggerated by the second, together with an occasional cause,—accident, cold,—with, and nearly constantly, the localization of one of two diatheses, syphilitic or rheumatismal, it occurs in the spinal cord. Such is the common origin of progressive locomotor ataxia, according to the author.

Thalline.—Strongly resembling kairine, thalline belongs to the chinoline series, and technically is *tetrahydroparamethyl oxyquinoline*. On account of the green color which it produces when brought in contact with the chloride of iron, the name of thalline was proposed for it by Skraup, the discoverer of this agent. The salts employed in medicine are the sulphate and tartrate. The sulphate is very soluble in boiling water, and dissolves in five times its weight of cold water.

Jacksch, of Vienna, has shown that it lowers the temperature in comparatively small doses (twenty-five to thirty centigrammes), and without causing sweating. Dujardin-Beaumetz declares that thalline is the most powerful of antithermic agents, but on account of its destructive action upon hæmoglobin it should be used with caution, and only in relatively small doses, not exceeding twenty-five centigrammes (four grains).—*Bulletin de Thérapeutique*, August 30.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 17, 1885.

EDITORIAL.

CELLS *VERSUS* BACTERIA.

WITH the completion of the centennial volume of his *Archiv* and the opening of a new series, Virchow discusses, in one of those keen, sharp reviews with which the readers of his journal are from time to time indulged, the burning question of the day: the battle of the cells and the bacteria. With the establishment of his journal, forty years ago, the great advance of organic chemistry had turned the minds of investigators in that direction, and it required no little courage to maintain the honor of biology; but the rapid progress in the knowledge of the minute structure of animals and plants finally led to the substitution of "*omnis cellula e cellulâ*" for Harvey's famous dictum, and placed the cell-theory of life and the cell-theory of disease on apparently sure foundations. More and more had we come to regard the ultimate histological elements of the tissues as the seat of the processes through which life is manifested. Nay, more! We had arrived at the conception of the cell as an *entity*, living its own special life and possessing a sort of individuality or personality. But now all seems changed. Micro-organisms have taken the front rank in medical interest, and "they rule the thoughts and the dreams of many old and almost all the young men." The cells are forgotten. An amusing extract is given from a Paris journal, in which are such sentences as "*La pathologie cellulaire a vécu*," "*à bas les cellules.*" Upon which Virchow comments, rather ironically, "The poor little cells! No wonder they cannot be seen by the men who use Abbe's condenser,—that most convenient bit of apparatus which permits only the microbes to appear in the field. But there they are, still the most important elements; and, as they are patient, their time will come again, after the physicians shall have filled up by their labors some gaps in botanical science."

An interesting sketch is given of the growth of our knowledge of parasitic fungi from the time of Bassi and Schönlein, and Virchow refers with pride to the many valuable communications on the subject which are to be found in his *Archiv.*

The problem in connection with diseases supposed to be due to micro-organisms is a threefold one: first, the discovery of the parasite; second, the demonstration of its life-history; and, third, the way in which it causes the disease. The controversy is on this last one; and just here we are brought back to the old pathology. Nowhere is this more clearly shown than in the history of phthisis. When Koch discovered the bacillus, there were those who behaved as if all the good work of the past had been useless. As the bacillus was a single entity, so was phthisis; lung-tuberculosis was only caseous hepatization, and gland-tuberculosis scrofula. "In spite of all, pulmonary tuberculosis remains a multiform process, which begins in many ways: sometimes in the mucous membrane of the bronchi, sometimes in the alveoli, and again in the lung-substance, and is accompanied by changes inflammatory as well as tuberculous, and whoever thinks to understand these must learn more than how to stain bacilli."

The battle is between the cells and the microbes,—*i.e.*, between living organisms. At present we know more of the activities and energies of the cells than of the bacteria. Of the great problems to be worked out, one is the relation of the tissue-elements to the various micro-organisms, and the other is the determination

of the distinction between the effects of these bodies and those of the substances they produce. The question of ptomaines has taught us how important the latter aspect is, and, curiously enough, the originally botanical problem becomes more and more a chemical one.

The veteran professor believes that we can still walk in the old ways, and that we need no readjustment of science to bring in the new facts.

THE HEALTH OF AMERICAN WOMEN.

THE question of whether or not a woman should learn the alphabet having by general consent been decided, in this country at least, very positively in the affirmative, the effect of a college course upon her physical health deserves and has received serious attention. The essay by Dr. Clarke on Sex in Education has had a good influence in indicating the only method in which her energies and efforts may be directed in obtaining her education with safety to her physical organism, and in showing incidentally that, if wisely controlled, college privileges may be enjoyed and utilized by women equally with men. Two years ago the Dean of the Women's Medical College of Philadelphia, after making inquiry among the alumnæ, ascertained that the health of the graduates of the school, far from being injured by their studies and mode of living, appeared to be really improved by the culture it entailed and the career of usefulness which had been opened to them. This really might have been anticipated if the criticism of Miss Martineau, that the feeble condition of American women was attributable to the vacuity of their minds, had any foundation in fact. Women are like men in being healthier and happier when pursuing some well-defined and worthy purpose in life.

From a recent investigation by the Massachusetts Bureau of Statistics of Labor it would even appear demonstrated that mental labor is better suited to women than physical. Certainly, at least, it seems established that there is nothing injurious to the health of women in a severe course of study. Of the twelve hundred and ninety women graduates of colleges in this country, seven hundred and five replied to the schedule of questions sent out by the Bureau; and, as these are the first detailed statistics concerning the health of this class of American women, their replies afford information upon several points of interest. From them it appears that seventy-eight per cent. were in good health upon entering college, at the average age of 18.35 years; in two per cent. health was fair, and in twenty it was poor. Deterioration in physical health during the course was observed in 19.58 per cent., amelioration during the same period in 21.13 per cent., the difference being 1.55 per cent. in favor of the college course. The most prevalent cause of disorder among those who studied severely during college life was constitutional weakness. Thirty cases of cerebral affections were reported, and twelve of eye-trouble; possibly some of the cases reported as brain-disorder belonged properly to the latter group. In conclusion, the Bureau of Statistics states that "the facts which we have presented would seem to warrant the assertion that the seeking of a college education on the part of women does not in itself necessarily entail a loss of health or serious impairment of the vital forces. Indeed, the tables show this so conclusively that there is little need, were it within our province, for extended discussion on the subject. The graduates, as a body, entered college in good health, passed through the course prescribed without material change in health, and, since graduation, by reason of the effort to gain a higher education do not seem to have become unfitted to meet the responsibilities, or bear their proportionate share of the burdens, of life."

The *Nation*, in commenting upon this, justly remarks that "Americans have not yet attained the robustness and vigorous color of the parent race, but they can no longer be regarded as a nation of invalids. The fragile and chalky young ladies who were in fashion twenty years ago have given place to young women of clear, bright color and healthy, vigorous step; the hollow-chested ministers and the lean and sallow business-men of a former day have passed away, never, let us hope, to return." Among the immediate causes of this improvement we would award a high rank to the persistent and disinterested teaching of the members of the medical profession, both men and women, notwithstanding the apparent intimation on the part of the *Nation* that the latter are chiefly "engaged in swelling the death-rate."

THE MICROCOCCUS OF GONORRHŒA.

RECENT investigations have led Kreis (*Wien. Med. Wochenschr.*, Nos. 30, 31, and 32, 1885) to the conclusion that the micrococcus first described by Neisser as being always present in gonorrhœal pus is the infective agent in transmitting this disease. Kreis made pure cultures of the gonococcus on a culture-medium composed of agar-agar and meat peptone. Exposure to a temperature of 35°–40° C. (95°–104° F.) was required for free development of the organism. When the temperature was raised to 50° C. (122° F.), there was no development of the micrococcus. This pretty nearly corresponds to the results of Sternberg's investigations into the thermal death-point of various micrococci and other sporeless organisms. Kreis also found that no development occurred in an alkaline culture-medium.

A large number of germicide agents were tried in order to determine the proportion necessary for the destruction of the vitality of the gonococcus. The following were found effective in the proportions mentioned: silver nitrate, .5–1 per cent.; cupric sulphate, platinum chloride, each 1 per cent.; thymol, 1 : 1100.

A number of inoculations of pure cultures upon inferior animals (rabbits and dogs) resulted negatively. In view of the negative results of Sternberg's inoculations of pure cultures upon human subjects, this might have been expected.

These observations of Kreis and of other investigators appear to show that: 1, a micrococcus having peculiar characters is always present in gonorrhœal pus; 2, a temperature of 50° C. (122° F.) and above will prevent the development of this micrococcus, but not necessarily destroy its vitality; 3, a one-per-cent. solution of silver nitrate, cupric sulphate, or platinum chloride, or a one-tenth-per-cent. solution of thymol (more accurately, 1 : 1100) will destroy the life of the organism; 4, pure cultures of the gonococcus are not inoculable upon man or the lower animals.

Although doubts have been thrown upon the specific character of the gonococcus, yet these need not prevent the testing of the practical conclusions drawn from Kreis's paper that the use of hot-water injections (50° C. = 122° F.) is indicated to restrain development of the organisms; and that one of the above-mentioned germicide solutions should be used by injection to destroy the infectivity of the virus. Preceding the use of the germicide, Kreis suggests an injection of a cocaine solution into the urethra to obviate the pain.

Although his culture-experiments failed to demonstrate the germicide action of chloride of lime, Kreis has found this agent, in one- to two-per-cent. solutions, effective in rapidly curing the disease.

DR. E. O. SHAKESPEARE has been appointed by his Honor President Cleveland a special commissioner to visit Spain

and to report to the State Department upon the recent epidemic and its sanitary lessons. Dr. Shakespeare is especially qualified for this work by his bacteriological studies in Koch's laboratory and in his own department at the University of Pennsylvania. The increasing appreciation of the value of state medicine by our government is gratifying and significant. We hope it may lead eventually to erecting a distinct department of public health in our national government, by the presiding officer of which a cabinet portfolio shall be held.

LEADING ARTICLE.

TETANY.

IT is strange that a disease of such frequent occurrence in France and Germany as tetany, and one possessing such marked traits, should be so rarely reported by English and American observers. Possibly some explanation for this may be found in the neglect of many of our systematic writers to mention the disease, while others seem to regard it as simply *tetanus mitis*. Although the pathology of tetany has not yet been definitely established, the morbid anatomy of tetanus has been at least sufficiently investigated to show that they are not identical, and that the difference between the two forms of muscular spasm is one of kind, and not merely of degree. The differential diagnosis of tetanus and tetany was the basis of a paper, illustrated by cases, published by Schuppert some months ago.* In the former he declares the prognosis to be as gloomy as in the latter it is favorable. He says, "Tetanus I am now forced to consider as almost exclusively a complicated wound-disease, with hardly any hope of recovery. *No wound, no tetanus;* though not every case of spasmodic convulsions associated with or following a wound can be called tetanus. The so-called 'idiopathic tetanus' is not a true tetanus, but almost always a *tetany*, a denomination first proposed by Corvisart, and since generally adopted in France and Germany." Local muscular spasms, however, must be excluded from the consideration of tetany, as suggested by the classical description of the disease by Kussmaul, and the strict application of this would reject the first case of Schuppert, in which painful paroxysmal muscular contractions occurred in a stump after a thigh-amputation, owing to the presence of an imprisoned ligature, which afterwards escaped by ulceration, with immediate and lasting relief to the patient. His second case is one of tetany owing to constipation.

A case of intermittent tetany of five years' duration in a patient suffering with chronic diarrhœa has been recently reported by Dr. James Stewart to the Medico-Chirurgical Society of Montreal,† the paper concluding with a few remarks upon the clinical history, pathology, and treatment of tetany, which admirably summarize the present state of our knowledge upon this subject. Three apparently distinct forms of tetany exist, forms which differ much in the causes which give them origin and in their prognosis, though but little in the clinical pictures which they present. The most common is the "rheumatic," or epidemic, variety; the second is more chronic, and is due to either chronic diarrhœa, prolonged lactation, or other debilitating influences. The third form follows operations for removal of enlarged thyroid glands. In the first two recovery is the rule; in the last-named, or surgical variety, early and complete recovery is stated to be very exceptional.

As regards its frequency, Dr. Stewart states that on the continent of Europe it is quite common, and this is true of all forms of the disease. In Vienna not a winter passes without an epidemic of it, while cases of the chronic and surgical varieties are not at all rare. Up to May, 1883, Billroth had performed seventy-eight operations for removal of goitre,—twelve of which proved fatal, six of these being directly due to tetany. In all, there were thirteen cases of tetany following the seventy-eight operations, six of which ended fatally. Two of the fatal cases ran a course of upwards of one year, while the remaining four terminated within two weeks. Clinically, tetany may be distinguished from tetanus chiefly by the fact that the

* Tetanus and Tetany. New Orleans Medical and Surgical Journal, vol. xii. pp. 434, 507.

† Canada Medical and Surgical Journal, August, 1885.

spasms exist primarily in the hands and feet, although in more severe cases the muscles of the trunk and jaws may be affected; but rigidity does not begin in them, as in tetanus. The contractions are not very painful, and usually vary in intensity from time to time, even when a degree of spasm is persistent for days. Tetany shows a special tendency to recurrence, after periods of entire immunity. It is most common in children, and in adults it appears occasionally; but especially is it apt to attack women during lactation.

Should tetanus be proved to be a bacterial disorder, or due to a specific poisonous element present in the blood, it will only furnish additional reason for requiring cases of tetany to be separated clinically from others which they more or less resemble. F. W.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

THE "French Association for the Advancement of Science" continues its sittings at Grenoble. M. Boucheron, of Paris, presented an interesting article in regard to the régime to adopt in cases of arthritism, particularly when seated in one of the organs of sense. The fact that in all these affections there is an overabundance of the nitrogenous elements (shown by uric acid in the urine, etc.) had led the lecturer to think that an alimentation containing very little nitrogenized matter would be advisable. He cited the case of the celebrated monks at the convent of the "Chartreuse," who live as follows: in summer they have two meals, composed of fish and eggs, vegetables, milk, and a little wine; in winter they take but one meal and a lunch, about the same, but no meat; and, notwithstanding the winter is very long and cold up there, they keep in excellent health. Gout or rheumatism is unknown among them. Even those who are so afflicted when they enter the order get cured by the régime. They have no articular diseases, and skin-disease or asthma has no hold on them. They all live to quite an old age. So that an alimentation containing but little nitrogen is not hurtful to health, but may be given with great benefit, and in arthritic cases may be conjoined with mineral waters and other appropriate treatment. M. Arduin had something to say on the therapeutic action of antipyrine. It seems to have a very special action in diseases of the lungs, principally in tuberculous fever. With small doses of 25 centigrammes to 50 centigrammes, the temperature will fall from one and a half to two degrees. Its action in nervous maladies, in articular rheumatism, and in albuminuria was spoken of, but it was admitted to be much more inconstant here. From some experiments, he had concluded that its action was on the medulla oblongata and the brain; it slows the pulse and causes death by arrest of the heart. Its hæmostatic effects are much more rapid than the perchloride of iron and ergotine, but they are entirely local,—quite different from ergotine. It is also an antiferment, like salicylic acid. The latest use of it is as a suppository for hemorrhoids.

M. Delthil again called attention to his treatment of diphtheria by inhalations of a mixture of coal-gas tar and turpentine. He still thinks that diphtheria is secondary to a primitive inflammation of the tracheo-pharyngeal mucous membrane. The inhalations he regards as the best method of preventing the secondary affection. M. Delthil also spoke of the use of large doses of sulphate of magnesia in cancer of the stomach. He could raise the dose to forty grammes without causing more than one stool a day, as the patient's system got used to it. There is perhaps no cure, but all the morbid symptoms disappear, and there is an arrest of the disease.

In the Anthropological Section, a disciple of Darwin, M. de Mortillet, read a paper on tertiary man. The question, he said, was not to know whether man really existed in the tertiary epoch as he exists to-day. Animals vary from one geological stratum to another, and the higher the animals the greater the variation. It was to be inferred, then, that man would vary more than the other mammals. The problem was to discover in the tertiary period an ancestral form of man, a predecessor of the man of historical times. M. de Mortillet affirmed that there are unquestionably in the tertiary strata objects which imply the existence of an intelligent being. These objects have been found at two different stages of the tertiary period: one in the lower epoch at Otta, in Portugal, and at Puy-Courney, in Cantal. These objects proved that at these distant epochs there existed animals acquainted with the use of fire and able more or less to cut stone. During the tertiary period, then, there lived animals less intelligent than existing man, but more intelligent than existing apes. M. de Mortillet gives the name of *ape-man* to the species, which he maintains was a historical or ancestral form of man, whose skeleton has not yet been discovered, but who has made himself known to us in the clearest manner by his works. A number of flints were exhibited from the strata in question, which had apparently been intentionally chipped and exposed to fire. The general opinion of the savants assembled at Grenoble was that there can no longer be any doubt of

the existence in the tertiary period of an ancestral form of man.

Our neighbors at Antwerp opened an International Congress of physicians engaged in the cure of mental diseases, under the presidency of M. Victor Desguin, who is the president of the Belgian society for mental diseases. Among the members of the Congress are Messrs. Pritchard, Davies, and Eaves, of London, and Peacocke and Curtis from Ireland, with Dr. James Rutherford, of Scotland. In his reply to the burgomaster's speech of welcome, Dr. Desguin explained that the scope of the Congress comprised especially these two subjects: (1) the basis of a good international statistic concerning the mentally diseased; (2) the relations between criminality and mental disease. The Congress charged an international committee with the duty of determining the headings for the bases of statistics regarding mental disease. Prof. Lefebvre, of the University at Louvain, speaking on the first subject, said, after having stated that there were any number of classifications used by great men, that he was forced to admit that none of them fulfilled the duty needed. He proposed to base all future statistics on the *number* of patients in any place; the *cause* of their alienation, if it could be found out; the *kind;* next the *duration;* and, finally, the *termination*. M. Oudart read an interesting paper on "Colonization." It seems that in Belgium, as well as in other countries, the number of the mentally diseased is fast increasing. The well-known colonies of Gheel and Berghe were spoken of, and M. Oudart thought it was greatly preferable to develop the idea of colonization than to shut up the mentally afflicted. The advantage as regards economy was great, and the influence for cure was immense. M. Benedikt, of Vienna, made quite a remarkable communication on the therapeutic effects of static electricity. He believes that, administered in the form of a douche, static electricity is a powerful modificator of the intracranial circulation. It is in this way that he can explain the good results he has obtained in auricular disorders which accompany nervous affections. He reported several cases, even of mania, that were relieved in this way. He did not, however, claim as yet to cure his patients definitely, but certainly he obtained a most marked sedative effect. M. Verriest presented a hypnotic patient who offered a most curious example of *double existence*. About the age of fifteen, the girl, who had been a most quiet, reserved person, had an attack of convulsions, after which she became quite changed in character, but in this condition *she could not drink*. A second attack brought her back to her first mood; a third then returned her to the second state, and so on. Dr. Verriest could provoke either side of her character with a few passes over her eyes and a sudden shout. When in her first phase she cannot speak and does not know where she is, while she remains quiet and silent when spoken to; when water is offered she drinks several glasses, because when she goes into her second mood she cannot drink, but she becomes very gay and lively, smiling and talking. The latter part of the Congress was taken up with the discussion of the relations between criminality and insanity.

The Italian Medical Association held its eleventh General Congress at Perugia, Italy, during the early part of September. Prof. Madruzza was the President. Dr. Bianchi, of Florence, spoke of his way of obtaining the contour of an organ by having the patient or an assistant fix a Camman's stethoscope about the centre of it, while the physician puts the two tubes in his ears and proceeds by percussion, marking the points where the dull vibrations give place to strong ones. The same gentleman spoke of the therapeutics of the sap of the fig-tree. Pliny and others, writing in the Middle Ages, used it. A few drops extracted from the leaves and fruit, placed on a piece of wet fibrin, rapidly reduce it to a substance soluble in water, which gives the reaction of peptone. Signor Bianchi has found this substance very useful in dyspepsias where there was a deficiency of the gastric juice. It could also replace papaine in application to the diphtheritic membrane and to old ulcers. Dr. Pagliani reported a large number of cases of sciatica which he cured by the application of a revulsive in the shape of a cerate made with senna. This plaster was kept on the part for seven hours, and followed by baths of hot, dry air. Some twenty-one cases of cure were attested. Dr. Giacomini, of Turin, presented a large number of microscopical preparations kept by a new process which does away with glass slides and covers altogether. By this method a great economy is realized, and the preparations are easy to make and can be handled much better than glass slides. The microscopical section is placed in a stratum of gelatin and covered back and front with a layer of collodion, very thin, to protect and render unalterable the gelatin. They are prepared as follows: Commence by cleaning a glass slide of the size wanted; this is the capital point,—all impurities must disappear. This done, then pass over the glass slide a very thin coating of collodion and allow the ether to evaporate. Then plunge it into a solution of gelatin at ten per cent., at the temperature of 50° C. The section is applied to the collodioned glass, and afterwards it is taken out of the bath of gelatin. The whole is now allowed to dry, and it is then slipped off the slide, when a clear preparation is obtained that is as light as paper. Prof. Giacomini passed around a number of these preparations which were as large as an octavo sheet of paper, and which took in complete brain-sections that would

certainly be of great use in macroscopic as well as microscopic study. Dr. Manassei, of Rome, had a good deal to say regarding the employment of medicinal substances incorporated in soap, such as camphor, naphthol, carbonate of lime, sulphur, boric and salicylic acids, arsenic, and corrosive sublimate, which are all used now as medicinal soaps and are highly advantageous, as they do not soil linen so much and allow of more ready cleansing of parts to which they are applied. Friction with these soaps softens the skin and impregnates the epidermis with the virtues of the medicine employed. We have already spoken of making mercurial ointment with soap. The only question to solve is, What relation have the salts of soda and potash in the soaps to the medicinal substances employed?

Naturally enough, cholera is still on the *tapis* here, although the daily papers do not mention it at all. While there has been considerable amelioration, yet it must be confessed that the whole of the south of France, Italy, and most of Spain is still infected with the fearful disease. The total of last week at Marseilles was forty deaths; a few weeks ago it was more than that number per day. At Toulon the rate is about ten per day now. A large number of the towns along the south coast (even Nice) have several cases. In Spain it seems at last to take a favorable turn, and only several hundred cases are reported daily (deaths). In Italy, most of the places along the Mediterranean are infected more or less. About Naples and in that city itself it rages with considerable intensity. Palermo, in Sicily, has the epidemic in its worst form: more than a hundred cases a day in the city itself. This has caused the ignorant people of Naples and other ports to insist on all persons coming from Sicily being forced to return. Here in Paris, so far, there has been no cholera. A fright was caused by an outbreak of dysentery at one of the large barracks; but, on boiling all the water used, the epidemic passed away. Prof. Peter held the Académie de Médecine during three sessions while he exposed his theories and treatment of cholera. Last year he had some fifty cases to treat, and he gave the substance of his treatment in his lectures at the Medical School. He believes that cholera is the top, as it were, of a morbid series which may stop anywhere from a simple diarrhœa up to real cholera. *Cholera nostras* is only a form of Indian cholera, from which it differs in intensity: either of them may become epidemic. As to real cholera being contagious, the professor thinks that it is limited to persons who are weakened by disease or to some individual predisposition. Thinking that the disease is an irritation of the solar plexus, with a hyperæmia of the digestive tract, Dr. Peter recommends every possible means to combat this irritation: vesication of the epigastrium, continuous current,—one electrode on the stomach and the other in the rectum (a current of twenty-five milliampères was used),—dry frictions, alcohol; for pain, hypodermics of hydrochlorate of morphia; in plethoric persons, leeches; and, finally, Prof. Peter spoke at length of the use of Dr. Chapman's ice-bag. He had used it in ten cases, with a result of ten cures. The ice-bag is a triple rubber bag, about twenty to twenty-four inches in length and about four inches wide. Each part is filled with fine pieces of ice, and it is applied to the back along the spinal column. Its application should be constant, so the ice must be changed from time to time. The vomiting was stopped by its use almost at once, while there was a great diminution in the cramp. The patients warmed up, the pulse came back, and all the symptoms gradually went away. Dr. Chapman is an English physician who has practised now for a number of years in Paris, but was formerly in India, where he had cholera to treat. He has just published a book entitled "Cholera Curable." * Some of your readers may remember his former recommendations of the ice-bag for sea-sickness. Dr. Miquel, whose interesting work here in regard to atmospheric germs is so well known, has a late article on the subject of "Cholera and Atmospheric Bacteria," comparing the number of bacteria found in the air during the last epidemic and those before and after. It was seen that the number was greatly increased during the epidemic, and grew with it, falling afterwards. A series of tables are given to prove this fact. The more the air was charged with bacteria, the worse the cholera was; so that a microscopic analysis of the air leads to this hypothesis,—that Indian cholera has for its morbid agent a bacteria; that this bacteria can take as a vehicle the air, and so infect human organisms directly or by means of entering the water or food we use. Temperature does not seem to affect the air-bacteria. The conditions that preside over their generation are *heat* and *humidity;* those that favor their dissemination are *dryness* and *wind*.

A treatment of enteritis in children which was very successful last summer in France it may be well to give you in full, as the mortality to infants in America is even more than it is here. Some two hundred and fifty cases were treated in all, with a result of only two deaths, under the direction of Dr. Cayla. With an absolute milk-diet (with lime-water), starch-water rectal injections were given, and the two following prescriptions:

℞ Tinct. nucis vomicæ, gtt. iii;
Syrup. krameriæ, 15 grammes;
Syrup. cydonii, 15 grammes;
Aquæ destillatæ, 40 grammes. M.

* Cholera Curable. A Demonstration of the Causes, Non-Contagiousness, and Successful Treatment of the Disease. By John Chapman. 8vo. Pp. 144. London, J. & A. Churchill.

℞ Potassii bromidi, 50 centigrammes;
Syrup. belladonnæ, 15 grammes;
Syrup. menthæ pip., 15 grammes;
Aquæ destillatæ, 40 grammes. M.
Sig.—Teaspoonful hourly of each alternately.

The nux vomica increases the contractility of the muscular fibres, the rhatany and quince act as astringents, while the bromide and belladonna stop the exaggerated secretion of the glands.

While on formulas, it may be useful to give the injection used here in rectal alimentation in cases of cancer of the stomach:

Beef-soup (concentrated and all the fat removed), 200 grammes;
Extract of cinchona (aqueous), 1 grm;
Port wine, 20 grammes.
To be administered five times a day, per enema.

We close our letter with a favorite formula of Dr. Juliens for pruritus:

Pomade for Pruritus Vulvæ.

℞ Zinci oxidi, 25 grammes;
Acidi salicylici, 1 gramme;
Glycerini amyli, 25 grammes. M.
Sig.—Apply as needed.

THOMAS LINN, M.D.

PARIS, September 23, 1885.

BOSTON.

AN UNSATISFACTORY WATER-SUPPLY.

THE water-supply of Boston has engaged a large share of the attention of her citizens during the last few years, and more especially perhaps during the last months. Owing to methods of administration which seemed questionable to the public, the former Board of Water Commissioners has been retired and new men appointed, who have taken hold of the problems which confront them with a manifest desire to do their best towards their solution. As in most of the older cities, our water-supply has grown not from one comprehensive original plan, but by such additions as were rendered necessary and available by the circumstances of the hour. These additions, however, have reduced the quality of the water from one of the best to one of the poorest. The original supply was taken from Lake Cochituate, some twenty miles west of the city. This has been supplemented by other neighboring bodies of water. One of these is Farm Pond, some two or three miles west of Cochituate. The water from Sudbury River also, still farther to the north and west, is collected in basins, and carried into and through Farm Pond, to be added to our supply.

About two years ago a very offensive taste was perceptible in this water. Prof. Remsen, who was called in as an expert, declared it to be due to algæ decomposing in Farm Pond. A conduit was therefore begun to carry the water from the river through the basin of Farm Pond, without intermixture with the waters of the latter, should these remain unhealthy. The so-called "cucumber taste" is now not present to any degree in this water.

A second and quite independent source of supply is from the Mystic River, north of Boston. This was brought in as the dower of Charlestown when that municipality was annexed to Boston. It also supplies one or two other cities and towns contiguous to Charlestown, but not within the limits of Boston.

The great difficulty with our present supply is this, that it is obtained from sources which form the natural means of drainage of other communities, and have been so used for years. These communities naturally consider it a grievance that they should be obliged at their own expense to provide new means of drainage simply to secure the purity of water that other persons choose to drink. Many of the people of Natick are emptying their drains into Pegan Brook, a tributary of Lake Cochituate. Manufacturing establishments and private houses in Framingham drain into Beaver Dam Brook, another tributary. A junction railway station at the latter place, well supplied with water-closets for the large number of travellers who use the station, drains into a cesspool which overflows into Farm Pond. The State Woman's Prison at Sherburne has an expensive but not particularly successful system of irrigation by which the filtered sewage, retaining, however, a large amount of organic matter in suspension and solution, finds its way into the lake. It is obvious that a considerable portion of human excreta must get into the Cochituate system, and that if any cases of typhoid fever or cholera were to occur in the houses contiguous to these streams the most disastrous results might be expected among the citizens of Boston.

The Mystic system is contaminated by refuse more obnoxious to the visual, olfactory, and gustatory senses, but perhaps no more dangerous than the Cochituate supply. A large number of tanneries in the towns of Winchester and Woburn are situated in the Mystic basin. A sewer was built by the city of Boston a few years since for the protection of this water, but without the co-operation of these other towns, so that the sewer was made only large enough to receive the tannery waste. Now a number of these manufactories do not make use of the sewer at all. At some points on this source of supply one may, as the writer has done, scoop up handfuls of hair and decaying animal matter. It is now under contemplation to abandon the whole Mystic system, and this will have to be done, or else much more active steps must be taken to shut off these nauseous impurities. A decision in a test-case brought against a person for contaminating the supply has been favorable to

the complainants, and such cases in future may be referred directly to a judge without going before a jury, the latter being usually prejudiced in favor of the defendants. Still, legal steps have to be taken separately against each person guilty of contaminating the supply, and this of course takes time.

A committee appointed jointly from the two district societies (Suffolk and Norfolk), which comprise most of the physicians of the city, has during the past summer investigated the matter of the purity of the water-supply. They discovered nothing that was unknown before, but have done something in the way of calling public attention to these abuses. At the request of the mayor they made a report to him of their findings, which was by him transmitted to the Water Board. The latter body have since issued a full report, covering the whole matter of the water-supply, and detailing clearly its sources of contamination. It is expected that the legal department of the city will be invited to take energetic action in the early future.

Some two years ago a State Commission was appointed to investigate the disposal of sewage, with a view to relieving the river-basins and protecting the water-supply of the various portions of the State, so that no one community should imperil the health of any other. A report from this Commission to the Legislature is hoped for this winter or next, and some suggestions of practical value are looked for.

THE MONTREAL EPIDEMIC

of smallpox has caused some anxiety not only in the border States, but also in Massachusetts, on account of the large travel between Canada and Massachusetts, and because many French-Canadians, who by reason of their bigoted opposition to vaccination and to isolation are especial sufferers from the disease, are in the habit of coming into our manufacturing towns for work during the winter months. Realizing the inadequacy of any individual State Board of Health to prevent the importation of the disease, the Governors of several States joined in a request for aid from the medical officers of the Treasury Department. Accordingly, Surgeon Austin, of the Marine Hospital Service, has gone to Burlington, Vermont, where he receives reports from a corps of inspectors who watch all trains crossing the line, vaccinate all unprotected persons, and detain such individuals and luggage as have been exposed to the disease. The employés of the Boston and Lowell and other roads communicating with Canada have been vaccinated, and no through-cars are now run to Montreal, the passengers changing cars at or near the line. Suspected baggage is fumigated at Rouse's Point, St. Albans, Richford, Newport, and Island Pond.

A NEW NURSES' HOME.

At the City Hospital, where for several years a successful training-school for nurses has been in operation, the nurses have had quarters in the hospital buildings, in many cases not out of earshot of the patients, and in others in rooms which were originally intended for patients. Last year an appropriation of forty thousand dollars was made by the city government for a building to be used as dormitory and refectory for the nurses. This building has been completed, and is just occupied by the nurses, who a few nights ago received their friends in it. It is one hundred by thirty-eight feet, four stories high, and is a tasteful structure of brick, accommodating sixty-eight nurses. The three upper floors are taken up wholly by sleeping-rooms, most of them designed for single occupants. On the lower floor, beside a few sleeping-rooms are reception-rooms and parlors, some of which at certain times are used for lecture-rooms in connection with the work of the school. The floors throughout are finished in hard wood with plain mats. In the basement is the kitchen with its adjuncts. The building lies just across the street from the hospital, and takes the nurses out of doors in passing to and from their work. An enclosed yard will, it is hoped, prove capacious enough for one or more tennis-courts, wherein the nurses when off duty can throw off the depressing influences of the wards.

A NEW HOSPITAL

has just been completed under the plans of the Board of Directors for Public Institutions, on Deer Island in the harbor, where are some of our reformatory institutions. It is on the pavilion plan, is of wood, and contains three wards. It was inaugurated September 30 by the usual ceremonies in favor with junketing councilmen on such occasions, and was opened for patients October 1. C. F. W.

CHICAGO.

PROFESSORS and pupils are returning to their posts, the medical schools are again showing signs of activity, and the janitors and porters have assumed that air of importance and responsibility so well calculated to impress all first-course men. The classes promise to be quite as large as those of preceding years.

As it is becoming fashionable to have a hospital of some kind or other as an annex to the medical school, one of our institutions, not to be outdone, has devoted a part of the college-building to hospital purposes, beds having been put in, and one or two wards opened for the reception of patients. This is of course very handy, but it is a question (for obvious reasons) if it be wise. This may be entertaining to the students, but its effect on patients remains to be seen.

The committee of the City Council is having its periodical struggle with the sewage question. Meantime, the filth for the mos

part goes to the lake, and though it may not yet have contaminated our drinking-water, such a condition can be postponed for a few months at most, and it is altogether likely that the city authorities (who, by the way, are totally incompetent) will wrangle and argue valuable time away to no better purpose than the expression of Common Council sense and wit.

There has been another revolution in our county insane asylum. Dr. Kiernan, after a long struggle with the rough element constituting the employés, and after enduring repeated personal assaults, had to succumb, and his resignation was eagerly accepted. The old order of things is again operative, and the "gang" is in full possession.

The only hope for all State and county institutions for the insane is to take them out of politics. As it is now, they serve but one purpose, that of providing places for men who could not outside the institution earn half the compensation.

The question of the intestine differences regarding the meeting of the International Congress hardly disturbs professional equanimity, the balance being rather favorable to the action of the American Association. The homœopaths of this city have raised a feeble cry for some representation, arguing that if leading regulars of this city can consult with them, the said regulars must in so doing recognize their methods, and therefore they stand upon a common basis.

A prominent homœopath remarked, "Do you think that when I meet an 'allopath' I am going to remain a passive witness and obedient tool to the dictates of one who I know takes no stock in my methods? No, sir; I invariably see to it that he meets me at least half-way; and I could name more than one prominent man who has given as substantial support to the theories of Hahnemann as I could wish. If representative men of your school can meet us and recognize and approve our methods, why can they not accord us recognition in their councils?"

Is it different that two should meet in council, or that twenty should?

Typhoid fever has been prevailing to some considerable extent, but is in most cases of a mild type. The past summer has been unusually cool, diminishing our mortality in certain directions.

CHICAGO, September 29, 1885.

HEMORRHAGE FROM A TOOTH-SOCKET.—Dr. Blackville reports a case of hæmophilia in which obstinate bleeding followed the extraction of a tooth. Ergot and witchhazel were given internally, and Monsel's solution applied locally, without checking the hemorrhage, when it occurred to him to fill the alveolar cavity with dry plaster of Paris, a few repetitions of which completely controlled the flow.—*Med. and Surg. Reporter.*

PROCEEDINGS OF SOCIETIES.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPTEMBER 10, 1885.

DR. J. HENRY C. SIMES, Vice-President, in the chair.

DR. GEORGE DOCK exhibited to the Society a patient suffering with

SECONDARY EPITHELIOMA,

and related the following history:

The case occurred in the practice of Dr. W. W. Keen at St. Mary's Hospital, to whom Dr. Dock acknowledges his indebtedness for the opportunity of recording it.

Mary C., æt. 70 years, married, born in Ireland, applied for treatment November 29, 1884. Her personal and family histories seemed to be unusually good. No traces of constitutional disease can be found. She uses alcoholic liquors in moderation, and has smoked a clay pipe for the greater part of her life. Filling the right submaxillary region and extending up over the inferior maxilla was a tumor, the distinct outlines of which included a space about three inches in diameter. The lower part was very prominent, standing out as a flattened node one and a half inches in diameter and about three-fourths of an inch high, the whole height of the tumor being one and a half inches. The growth was hard, immovable on the lower jaw; the surface was smooth and red, changing to a dull purple on the nodular elevation. On the summit of this growth was an opening leading upward and inward three-quarters of an inch. The skin around the opening was everted, and the surface of the crater-like cavity covered with large and small granulations, which exuded a thin, gray, offensive pus. The neighboring lymph-glands were not enlarged. The general condition was good.

The patient stated that the growth first appeared six months before admission to the hospital as a "kernel" below the jaw. She applied various poultices and salves to it. The tumor grew rapidly for the following four months, when it opened, discharging a large amount of pus; after that there was no apparent increase in size. The patient could assign no cause for the tumor except a scald received about one year before on the lower lip, near the angle of the mouth on the right side. This was followed by an ulcer, which was removed at the Episcopal Hospital in February, 1884, about two months before the appearance of the enlarged gland. Dr. J. M. Bradford, late resident-physician at the Episcopal Hospital, states that the ulcer was noted as epithelioma.

On December 3, 1884, Dr. Keen removed the tumor, together with a margin of healthy

skin and the submaxillary salivary gland. The external plate of the inferior maxillary appeared roughened, and was cut away. The cavity of the mouth was not opened. By the use of hare-lip pins and sutures the edges of the large wound, four and a half inches in diameter, were approximated almost perfectly. The dressings at first were carbolized; afterwards iodoform was used. In the fourth week after the operation a small, red, indurated, sometimes painful, spot appeared in the skin just posterior to the wound; a few days later the patient was discharged.

Microscopic sections made through various parts of the growth showed the structure of squamous epithelioma everywhere. The salivary gland was invaded. No trace of the lymph-gland could be found, and the supposition was that it had ulcerated away completely.

The patient was lost sight of until the beginning of May, 1885. She stated that, after leaving the hospital, the small swelling alluded to increased rapidly in size, and in a few weeks was larger than the one removed. She used no irritating measures, but the tumor broke down and ulcerated away, leaving a large granulating surface.

On examination, I found an ulcer on the side of the neck, extending from one inch to the right of the median line to beyond the angle of the jaw, irregularly circular in outline and containing islands of epithelioma. There was a small opening into the cavity of the mouth midway between the angle and the symphysis of the jaw, and just inside of the inferior border of that bone. The symphysis was drawn to the right about half an inch. There was a hard, tender swelling on the gum, above the inner edge of the opening, covered with small, dark-red nodules. In June the inferior maxilla was still more atrophied, and had separated at the point of swelling and opening before mentioned. The adjacent ends of bone and gum were covered with a small fungous growth.

The process of atrophy and new growth is still continuing. The left alveolar process approaches the median line of the oral cavity, and the point of the chin is on a line dropped from the outer angle of the right eye. The ulcer on the neck is healing, but the new growth in the mouth is rapidly enlarging, so that the tongue cannot be extruded. There are no enlarged lymph-glands, but within a few days the patient has complained of pain in a gland in the subclavian region. The general condition is very poor; the patient lives on liquid food, and takes morphia to induce sleep.

[The patient and the microscopic sections were then examined by the members of the Society.]

Dr. T. D. DUNN exhibited the contents of a cyst recently removed from the back of a cow.

Dr. GUY HINSDALE exhibited a specimen of

ENLARGED PROSTATE.

The specimen had recently been presented to the Mütter Museum of the College of Physicians by Dr. J. L. Stewart, of Erie, Pennsylvania, and was removed from a man, æt. 75 years, who, sixteen years previously, had first come under Dr. Stewart's observation. At that time he was a strong, well-developed man, who had never been sick before in his life, but was then suffering from retention of urine, which had existed for seventy-two hours. It was found to be impossible to introduce a catheter, owing to an enlarged prostate, estimated to be larger than a hen's egg. Circumstances rendered it necessary to force an instrument through the gland, and five and a half pounds of urine were drawn off. A train of most unpleasant symptoms followed, and for weeks there was profuse suppuration, with complete incontinence and great prostration. After about thirty days, improvement began, and continued to complete recovery. Three months afterwards the patient seemed perfectly well.

Attacks of cystitis and retention became frequent, and for sixteen years only once did an interval of over three months pass without an attack, the usual time being about twenty days. During this time Dr. Stewart introduced the catheter eleven hundred and ninety-four times. Pain was intense during the later years, when four or five ounces of urine had collected in the bladder. Meantime, the prostate continued to increase in size, and in November, 1884, was believed to be of the size of a large orange. On the night of the 27th of May, 1885, the patient had his last attack. Dr. Stewart not being at hand, two other physicians did not succeed in introducing an instrument. Just before 9 A.M. of the following day the man was attacked with the most excruciating pain, followed by a severe chill. At this time it is believed by his medical attendants that rupture of the bladder occurred, and the early date of this accident is accounted for as being the result of the contracted condition of the bladder. From this time there was no acute pain, but a severe aching followed by prostration. At 9.30 A.M. the bladder was aspirated, one ounce of urine coming away. Dr. Stewart catheterized him on the third day, drawing about a tablespoonful of urine. The patient died on the morning of the fourth day. His mind was clear and his voice strong to the last.

The post-mortem examination was not made by Dr. Stewart personally. It is stated that there was a rupture of the anterior part of the bladder, near the fundus, and that the cavity of the abdomen was filled with urine.

The specimens were not removed in such a way as to make this evident.

The specimen, as presented, consists of the prostate gland laid open by a cut in the ver-

tical line, and having attached to it the bladder, the walls of which have been cut in several directions. These walls are thick, and have apparently undergone fatty degeneration, as had also the kidneys, which accompanied the specimen, the pelves of which were thickly overlaid with fat. The long diameter of the prostate, after being in alcohol for three months, is three inches; the shorter diameter, two and three-quarter inches; the third lobe is one inch long, and through it the catheter passed and still remains in position. The bladder-walls, when replaced, indicate a very small internal capacity.

Dr. J. M. BARTON stated that but one case of rupture of the bladder from over-distention had come under his observation. It occurred in a German, who had an impermeable stricture of eight years' duration. No urine whatever passed. The contents of the bladder were removed several times by aspiration, while attempts were being made by filiform and other bougies to pass the stricture. As these failed, perineal section was suggested to the patient and his friends, but refused, and the doctor was told that they would send for him when they needed him. Three days later Dr. Barton was sent for. He proceeded to the house, accompanied by Dr. S. W. Gross. The man was in a dying condition: the bladder-tumor, which before was very prominent, had disappeared. Aspiration over the pubes and a trocar inserted by way of the rectum both failed to reach any urine.

On post-mortem examination, a small rent was found in the upper part of the bladder, but the specimen could not be secured.

In old cases of prostatic obstruction Dr. Barton had several times found, on post-mortem examination, that the patient had thrust the instrument through the "third" lobe. In one case several such openings had been made and had healed kindly.

The Committee on Morbid Growths reported regarding Dr. Mitchell's specimen of

CANCER OF THE STOMACH,

exhibited at the last meeting in June, as follows:

(*a*) *Stomach.*—Microscopic sections across the wall of the stomach show an active proliferation of the epithelium of the mucous membrane pushing its way into the wall, infiltrating it and forming alveolar spaces. The wall is further infiltrated with young cells, which for the most part replace the normal structure of the part. The process has probably been a chronic catarrh, with great hypertrophy, passing gradually into a carcinomatous type.

(*b*) *Omental Nodules.*—Sections of these show an indistinct alveolar structure filled with epithelial cells, and a small-celled infiltration of the adipose tissue. The appearances are those of a carcinoma, secondary probably to the growth in the stomach.

The committee reported regarding Dr. Nancrede's specimen of

HÆMATOCELE OF THE TESTICLE

as follows:

Sections exhibit layers of more or less well developed connective tissue, through which are scattered numerous young connective-tissue cells. No evidence of sarcoma-tissue is present. The growth should be classed as a chronic connective-tissue hypertrophy, and, as the sac contained hæmatin, the specimen is of chronic hæmatocele.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held October 1, 1885, the President, A. JACOBI, M.D., in the chair.

ADDRESS BY THE PRESIDENT.

In his address the President called attention to a few facts which were likely to have an important bearing upon medical progress. He first referred to the collective investigation of disease, and the work proposed to be done in this direction by the committee appointed at the International Medical Congress held in Copenhagen. After stating the objects to be accomplished, and refuting objections which had been made to collective investigation of disease, he expressed the hope that the Committee would be sustained in its efforts by the general profession. He then compared the code of ethics of the Medical Society of the State of New York with those of the American Medical Association, as interpreted at the recent meeting in New Orleans, and expressed the opinion that there was but little difference between the two as it concerned consultations. The State Society, therefore, was to be congratulated upon the influence which its action had had in bringing about in so short a time this change of opinion on the part of the profession throughout the country. But as he had replied to a suggestion by one of the members of the Academy, this Society was not the place to introduce the subject of medical politics. He then spoke of amendments to the by-laws, and suggested the importance of widening the duties of the Committee on Ethics, requiring its members to bring charges against those who violated the rules, and not to wait until charges were preferred by another before they took action.

Another warning was given to those who sought advertisement in public prints.

OBSCURE CASES OF WEAK HEART.

Dr. R. VAN SANTVOORD then read a paper on this subject. The histories of four cases were related, which were made the basis of remarks upon special symptoms and upon treatment, particularly by digitalis and caffeine. Weakness of the heart-muscle, independent of valvular lesions, is known to be

an important factor in a large number of morbid conditions; it is the chief source of danger in most acute febrile diseases; it occurs as a result of long-continued anæmia and of various toxic conditions, particularly in alcoholism. Failure of cardiac compensation is frequently the cause of death in chronic renal disease. The right ventricle is frequently affected in obstruction to the lesser circulation. Degeneration of the cardiac muscle might result from inflammation in the course of general diseases, or as a result of lesions of the coronary vessels. The heart might be weakened by repeated strain, and at the autopsy we might find fatty, granular, or waxy degeneration, or the structure of the heart might appear normal, although the history during life pointed to cardiac failure. The diagnosis in many of these conditions could be easily made, but in others the relation of the symptoms to cardiac failure might be overlooked. It was to these obscure cases that the author directed attention.

In the first of the cases which he reported the patient was a man, 42 years of age, with a tendency to corpulency. He had the appearance of being in robust health, but he complained of falling asleep during the day, of headache, and weak memory. He was not addicted to alcohol in excess. There was some indigestion and very slight dyspnœa. The heart-sounds, especially the first, were weak; there was reduplication of the second sound at the base; the pulse 75. Dr. Van Santvoord made the diagnosis of weak heart following pneumonia, a severe attack of which the patient had two years before, at which time his symptoms began. At first the tincture of digitalis and tincture of nux vomica were given, but without improvement, when caffeine and strychnine were substituted, with the result of soon increasing the heart-sounds and causing the disagreeable symptoms to disappear. Twenty-three weeks after the commencement of treatment the patient was in a comfortable condition. There was some shortness of breath, and reduplication of the second sound of the heart could still be heard at the end of inspiration and commencement of expiration.

The second case occurred in a stock-broker, aged 38, who had had business trouble which led him to excessive drink and to take but little nourishment. There was a family history of gout, and one relative had had asthma. Dr. Van Santvoord found slight dyspnœa at the time he was called; the lungs were normal; the first heart-sound was weak, the second hard and metallic and not quite clear. The urine contained a small amount of albumen, with a specific gravity of 1.024. The patient managed to refrain from alcohol, was given good food, and morphine and Hoffman's anodyne at night, and within six days great improvement had taken place. The amount of urine passed during the twenty-four hours was one quart, the specific gravity being 1.014; no albumen. The symptoms, however, returned as soon as the doctor's instructions could not be fully obeyed. The apex-beat was weak, the pulse 102, with occasional shooting pains from the apex to the scapula. Remedies were administered for the correction of the condition of the alimentary tract, and digitalis for the cardiac weakness. Within two days the pulse fell to 84 and increased in tension. After six months' restraint from alcohol, the patient's condition was comfortable and his general health much improved. The first heart-sound was still short and valvular, the second metallic and sharp, the arterial tension low, the pulse 82. The urine contained a small amount of albumen and a considerable number of hyaline casts. Malnutrition had existed in all the organs, resulting from wrong habits, but the rapid and continued improvement after the use of digitalis was proof that the heart was the organ chiefly affected. The exact cardiac lesion was conjectural; there was persistent irritability of the heart, apparently due to mental worry. It was fair to conclude, from the entire history, that the albuminuria was probably unassociated with grave organic changes in the kidneys.

In the third case the patient, aged 54 years, had been accustomed to out-of-door sports, and had probably over-exerted himself; but his health had previously been good, except for constipation. When Dr. Van Santvoord saw him he complained of drowsiness, lassitude, inaptitude for work, and distressing headache, chiefly in the vertex. He had long been in the habit of rising at night to urinate. The apex-beat was found in the line of the nipple, sixth intercostal space, where there was a faint systolic murmur; the cardiac sounds were weak; the lungs were normal. A stomachic failed to correct the symptoms in the head. The tendency to constipation responded only to faradization. After twelve days' administration of ten minims of the tincture of digitalis and twenty minims of the tincture of chloride of iron, the heart-sounds had become louder, the pulse stronger, and the general condition markedly improved. The urine was still passed in large quantity, specific gravity 1.010 to 1.019; no albumen. It was learned that the patient had been treated for stricture, and was suffering from seminal emissions. The enlargement of the heart and the passage of a large quantity of urine led to the suspicion of contracted kidney, with secondary heart-failure, although against this view was the fact that the specific gravity of the urine was normal when the amount passed was considered, and it contained no albumen. The patient went South, and remained in fair health. A year afterwards he visited Dr. Van Santvoord, when he was a little short of breath; had an indefinite disagreeable sensation in the head, and occasional shooting

pains in the arms and legs; the apex of the heart in its former situation; the heart-sounds (especially the second) weak, with a reduplication of the first to the left of the sternum and on a level with the fourth rib. The sphygmographic tracing was of large amplitude, the tidal wave more marked, the aortic notch much higher in the tracing, and the dicrotic wave far less developed, than in the case of the second patient; the pulse 75. Digitalis and fluid extract of ergot caused within ten days diminution in the amplitude of the pulse, lessening of the dicrotic wave, and lowering of the pulse to 64. The sphygmographic tracing now differed from a healthy tracing only in a little lower tension. The urine had a specific gravity of 1.015; no albumen; few pus- and red blood-globules; seventy ounces in the twenty-four hours. The fact that the patient had held his own for a year, the specific gravity of the urine normal for the amount passed, and that the sphygmographic tracing showed low arterial tension, led to the conclusion that the polyuria was due to some other cause than contracted kidney, being possibly a reflex result of the urethral lesion. The cardiac failure, therefore, seemed to be an independent matter. The age of the patient pointed to an early stage of one of the chronic degenerative processes. His addiction to athletic sports suggested the weak, dilated heart, without recognizable histological change, noticed by Münziner.

The fourth case was introduced only on account of certain special features. A boy, aged 14, had a severe attack of measles; previously health had been good. After convalescence he suffered from dyspnœa and lancinating pain in the cardiac region on running. He was thin and pale; cardiac beat was marked over the apex, in the epigastrium, and second left interspace; both ventricular areas enlarged; the heart-sounds loud. There was distinct reduplication of the second sound in the third left interspace, near the sternum. A loud, blowing, systolic murmur was heard over arteries at base of the neck, transmitted into the brachials and femorals. Improvement took place under iron, strychnine, and rest. Dilatation of the heart diminished, the arterial murmur disappeared, the venous hum became lessened, but the reduplication of the second sound persisted. The absence of cardiac murmur and the rapid improvement pointed to cardiac dilatation, with perhaps some fatty degeneration.

It would be seen that reduplication of one or other of the heart-sounds was present in three of these cases. Different explanations of this phenomenon had been offered, but Dr. Van Santvoord thought the most probable one was that reduplication of the first sound was due to asynchronism in the contraction of the ventricles, and that reduplication of the second sound was caused by asynchronism in the closure of the aortic and pulmonary semilunar valves. Such was the explanation accepted by Bramwell for at least the large majority of the cases. The author then considered the theoretical speculations concerning this phenomenon by different writers, and said that persistent reduplication of the first sound had been clinically associated with functional disturbances and grave organic changes of the heart, with or without valvular disease, in a large number of cases; and we could at least say that its presence in any given cases was presumptive evidence of cardiac lesion, the character and gravity of which could only be determined by a study of the other symptoms. Reduplication of the second sound might be due either to derangement of the nerve-supply or lesions of the cardiac muscular fibres, causing contraction of one ventricle to take place a little more quickly than that of the other, or changes in the relative amount of resistance to be overcome by the respective ventricles. Clinical observation showed that reduplication of the second sound was so frequently associated with obstruction to the greater or lesser circulation, or with lesions of the cardiac muscle, or with a combination of both, that its presence should lead us to search for important cardiac disease.

In interpreting the meaning of a strong or a weak heart-sound, we should consider both the degree of arterial tension and the form of the ventricular contraction. The sphygmographic tracings exhibited in these cases showed that in a study of the weak valvular first sound the peripheral resistance to the circulation was as important an element as was the strength of the ventricular contractions.

Dr. Van Santvoord thought it probable that the contrasted effect of caffeine and digitalis in these cases was due to the slighter influence of caffeine upon the vaso-motor apparatus. Caffeine, it would be seen, had proved efficacious in some of the cases where digitalis had failed. The greater safety and more rapid action of caffeine would cause it to be preferred in cases of heart-failure occurring in acute diseases or primary degenerative process of the heart-muscle. He gave it in small but increasing doses, and preferred the combinations with salicylate or benzoate of sodium to the insoluble and unstable citrate.

In concluding his paper the author said that he had probably advanced no new truths, but he hoped it might have the effect of calling more general attention to this rather neglected class of cases of cardiac affections.

DISCUSSION.

Dr. JOHN C. PETERS related the case of a man, 60 years of age, who had always been healthy, of good habits, but who probably had become somewhat reduced in strength by innutrition. He then contracted bronchi-

tis, slight œdema of the lungs occurred, and what astonished Dr. Peters was the fact that there was great weakness of the pulse and cardiac failure. There was a struggle for life during ten or twelve days, after which convalescence slowly set in, and the man was now able to walk a mile. But the dilatation of the right side of the heart would probably not be restored for months. He felt sure that it had not existed before this attack.

Dr. L. WEBER used the hydrobromate of caffeine, and thought that it hastened recovery after weakness of the heart following acute diseases, as typhoid fever, pneumonia, scarlet fever. He would not use tincture of digitalis, but preferred the purer article, consisting of an infusion of the English leaves, or Squibb's fluid extract. In the greatly corpulent person, suffering from dyspnœa and apparently weak heart, he did not give drugs, but regulated the diet, restricted the use of liquids, and directed the patient to walk up-hill.

Dr. E. D. HUDSON said a differential diagnosis in cardiac affections could probably be arrived at if we studied carefully the anatomical structure of the organ, its nerve-supply, and the influence of disturbances of other organs upon the heart's action. First exclude valvular and organic lesions, and then the influence of excitement, depressed vital action of other organs, etc. A patient with a very slow pulse and cardiac symptoms without evidence of organic lesion, and suffering from constipation, would often be relieved of his cardiac symptoms by a cathartic.

The paper was further discussed by Dr. GARRISH and Dr. A. H. SMITH, who thought digitalis might have a twofold action,—viz., in large doses increasing the heart's action, and in small doses improving its nutrition; also by Dr. FRUITNIGHT and the author.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, SEPTEMBER 28, 1885.

The President, DANIEL LEWIS, M.D., in the chair.

AMONG those nominated to office for the approaching year were: Daniel Lewis, M.D., for President; Lawrence Johnson, M.D., for Vice-President; Wesley M. Carpenter, M.D., for Secretary; O. B. Douglass, M.D., for Treasurer.

GONORRHŒA IN WOMEN.

Dr. A. F. CURRIER read a paper with this title, and referred for a more complete exposition of his views to an article which he published in the *New York Medical Journal* for January 10 and 24, 1885. The author considered gonorrhœa to be more common among women in this country than was generally supposed even by physicians, and the many evil consequences of the disease made it of the greatest importance that it receive due attention. After quoting the conclusions arrived at in the article referred to, the author said that no important contribution to this subject had been made in American literature since Dr. Noeggerath published his paper in 1876, which had been previously published in Europe in 1872. The views which Noeggerath then advanced were received with incredulity both here and abroad, but they were now beginning to bear fruit, as had been predicted by their author. Dr. Currier then devoted a large portion of his time to a review of the parasitic theory concerning the etiology of the disease. Recent studies going to prove the causative relation of the gonococcus to gonorrhœa, especially those by German bacteriologists, were fully considered. The presence of this germ in any given case brought before the courts of law would offer important evidence. As to the parts liable to be affected by the gonorrhœal poison, Dr. Currier expressed the opinion that the urethra was less likely to be affected than had been stated. Its presence in the periurethral or præurethral glands was liable to be overlooked. Regarding the treatment for gonorrhœal affections of the tubes and ovaries, he thought that all means should be adopted for relief before resorting to abdominal section. The most common form of gonorrhœal disease of the Fallopian tubes is pyosalpinx; but pyosalpinx is not always of gonorrhœal origin. He had never seen gonorrhœa cause miscarriage when it occurred during the pregnant state; nor had he known it to produce any of the ill effects upon the offspring which syphilis is liable to do.

Regarding treatment, Dr. Currier was impressed with the importance of judicious prophylaxis, and thought that institutions which were liable to spread the infection should be under police regulation. Yet he had no elaborate plan to suggest, but simply referred to the government control over prostitutes in France, Alexandria, etc.

With regard to the local treatment, he reviewed the experiments of Oppenheimer and others as to the destructive effect of different agents upon the gonococcus, such as solution of corrosive sublimate, nitrate of silver, iodine, nitric acid, etc.; but for use in the prevention of the development of gonorrhœal inflammation after exposure, these agents were dangerous in the hands of persons ignorant of their proper use. The liability of infection could not be considered as having passed so long as any gonococci existed in the discharges. Experiments showed that cubebs and copaiba were harmless to the gonococci, but that, after having been ingested and eliminated by the kidneys, they were very destructive of these germs. Oppenheimer placed a solution of corrosive sublimate at the head of the list of gonococcides, but Dr. Currier had not found it satisfactory.

He had obtained the best results from subnitrate of bismuth in glycerin. They produced depletion of the congested tissue, and also acted as constringents. It was of the greatest importance that the treatment be carried out systematically, even in detail. The fourchette, glands, and crypts which were difficult to reach should receive particular attention. Dr. Currier thought gonorrhœa was absolutely curable. If the conditions of treatment pointed out were fulfilled, the dead germs would not reproduce themselves. Of course, reinfection was always possible.

Dr. H. T. HANKS said that the question of etiology was still a mooted one, but the pathological results of the disease were only too evident. He believed that a large percentage of all the special female diseases we were called upon to treat were the result of gonorrhœa. This was especially evident in dispensary practice. Dr. Hanks also believed that no doctor could make a positive diagnosis of gonorrhœa or state that it was absent in houses of prostitution unless it were by the aid of the microscope. Women whom the physician would pronounce free from gonorrhœa would be found to spread the disease. Dr. Hanks thought that gonorrhœal urethritis was far more frequent than gonorrhœal endometritis. He had confidence in the successful treatment of the disease, and thought that laparotomy should not be resorted to until every other means had been first tried and failed. He had found various solutions injected into the vagina, the injections made frequently and thoroughly, efficient in the acute stage of the disease.

Dr. H. J. GARRIGUES had made no observations regarding gonococci, but he was in the habit of differentiating between simple vaginitis and gonorrhœal vaginitis by the virulence of the inflammation in the latter affection. The disease was liable to affect the Bartholin glands, and in this case they should be opened and an application made. He had found the bichloride injection the most effectual, but he had formerly made use of other agents and they had proved satisfactory. He agreed with Dr. Currier that the urethra was not often affected. In disease of the uterus he used a strong solution of iodine. As to the efficiency of pads, he thought it was due chiefly to the glycerin itself rather than to the agent it held in suspension.

Dr. H. J. BOLDT found the urethra affected more frequently than the remarks of the other gentlemen would lead us to suppose. He employed chiefly iodine and glycerin, and glycerin and boracic acid. Most cases continued as long as three months.

Dr. LITTLE could not see how the discovery of the gonococcus was going to prove of much value in diagnosis among physicians generally.

Dr. MESSENGER did not think a patient could properly syringe herself; it should always be done by the physician, fully ballooning the vagina. This was easily effected by a syringe which he described. Bichloride of mercury was the best agent.

Dr. CURRIER, in closing the discussion, was not sure but that glycerin played an important part in the cure. He thought we had gained something in the way of diagnosis if it could be made by the microscope in cases of law, although it were not practicable in every-day cases.

THE TREATMENT OF LEPROSY.

Dr. H. G. FOX read the paper, which included an earnest plea for improving the leprosy patient's morale. He thought the medicinal treatment was often rendered ineffectual by excluding the patient from society, perhaps putting him in confinement, and by giving him to understand that his disease was necessarily fatal. He related the case of a missionary to the Sandwich Islands who acquired leprosy, and, notwithstanding the disease was well marked, the symptoms had nearly disappeared under moral influences and the use of chaulmugra oil. Dr. Fox also mentioned the question of contagiousness of leprosy and its hereditability. He did not consider it hereditary, and believed it to be very slightly contagious. He knew of no instance where it had gained a foothold in a civilized or refined community.

Dr. FULLER had seen several hundred persons affected with leprosy in Havana, where the disease was recognized as contagious, but only slightly so. They were considered incurable; their condition was low.

Dr. O. J. MOORE had seen the leprosy patients in the West Indies, and said that, so far as moral influence was concerned in the treatment, the buoyancy of the feelings in these patients was often remarkable. They were allowed many privileges, and could be seen in the streets. He thought the disease might in some cases be hereditary, although it was liable to pass over a generation or more.

Dr. J. C. PETERS had seen the patients with leprosy in Havana, and said they seemed indifferent to their fate.

Dr. DELAVAN spoke of a visit among lepers in Norway, where their number had been reduced from over three thousand to seventeen hundred. They had good surroundings and excellent asylum; were allowed considerable freedom. Their disease, however, was considered incurable, and they received little or no treatment. He was surprised at the author's expressions of hope for these patients. Most of them were of the lowest condition in life.

Dr. H. G. PIFFARD alternated the treatment between nux vomica and chaulmugra oil, according as the patient could bear it. Improvement was common under this treatment.

After some business transactions, the Society adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

STATED MEETING, SEPTEMBER 23, 1885.

The President, JOHN A. WYETH, M.D., in the chair.

RECURRENT EPITHELIOMA OF THE PENIS.

DR. W. P. WATSON presented a portion of the penis of a man 49 years of age, the seat of epithelioma. The man's family history was good; his health had always been good; there was absolutely no specific history. Dr. Watson was called to see him about two years ago, when he was having a profuse hemorrhage from the penis. The hemorrhage had occurred pretty constantly during the past year. In 1865, according to the patient's story, he received a slight wound on the dorsum of the penis, which bled, but did not require the presence of a physician. A short time afterward he entered Bellevue Hospital, where Dr. Hamilton cut away the foreskin for tight phimosis, and, as the patient stated, also removed indurated tissue; but this probably was only blood-clot. None of the head of the penis was removed. About six months afterwards a wart-like growth appeared on the under surface of the organ near the frænum, which caused irritation and was removed. Six months later an ulcerative process began at the base of this growth and spread, and, as said, finally caused almost constant hemorrhage and led to amputation by Dr. Watson two years ago. There had been no enlargement of the inguinal glands; the epitrochlear glands were slightly enlarged. The patient made a rapid recovery from the operation, and was now in good health.

The PRESIDENT said that during the past eighteen months he had seen four cases of epithelioma of the penis, in three of which he performed amputation. In all of the cases there had been phimosis. On inquiry among his friends, he could not learn of a single case of carcinoma of the penis in which phimosis had not existed. This certainly was another indication for circumcision.

VERMIFORM APPENDIX OF GREAT LENGTH.

Dr. LOUIS WALDSTEIN presented a vermiform appendix sixteen centimetres in length, which he had found in a dissection-subject at the German Hospital. Another interesting fact was that the appendix lay with the long axis of the body, and was attached to the hepatic flexure of the colon. There probably had been slight local peritonitis, dislocation of the colon downward, during which the appendix became agglutinated, and was lifted with the subsequent replacement of the colon.

RENAL AND BILIARY CALCULI.

Dr. WALDSTEIN also presented a urinary calculus composed of urates, which was interesting when taken in connection with the history. He was called to see the patient in April last, when he was suffering from an attack of colic, located in and just to the right of the epigastrium, extending over the abdomen. There was slight jaundice. The presence of biliary concretions, afterwards found in the fæces, confirmed the diagnosis of biliary calculus. Improvement took place under the Carlsbad treatment. But in June he was called to another attack: this time the pain commencing in the right lumbar region, extending down the ureter and right leg, and diffused over the abdomen. The subsequent passage of the calculus presented with the urine confirmed the diagnosis of renal calculi. The attacks were accompanied by pain in the glans penis, a dizzy sensation, and, what was peculiar, a tingling in the fingers of both hands. The patient had been a sufferer from digestive derangement for eleven or twelve years, and Dr. Waldstein remarked that such patients were liable sooner or later to suffer from biliary or renal concretions.

The Society adjourned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

(Continued from page 34.)

The President, B. F. BAER, M.D., in the chair.

DR. E. E. MONTGOMERY read the following supplement to his paper on

BROMIDE OF ETHYL.

I read a paper on bromide of ethyl as an anæsthetic in labor before the April meeting of this Society. Although I did not attempt a history of the early administration of the drug, subsequent investigation has shown me that I did Dr. L. Turnbull injustice in not mentioning that to him we are indebted for the revival of this agent and its first use in this country. In following the German literature by which I was led to use this drug in labor, I ascribed its first obstetrical use to Lebert, of Paris. The first case in which he used it was for the application of forceps, and occurred in March, 1881; but a paper published by Dr. Turnbull (*Med. Bull.*, June, 1880) shows that he had then used it in a second case of labor and spoken in high terms of its peculiar advantages. Dr. H. Augustus Wilson had used it in labor prior to August 7, 1880, when he published an article upon this drug (*Med. and Surg. Rep.*, August 7, 1880). It becomes quite evident that the first obstetrical trial of this agent was made in this city, and the priority lies between the gentlemen named. Various mixtures of the ethyl have been advocated in labor and in minor surgical operations. Booth, of Ohio (*Ther. Gaz.*, 1884–85, p. 159), recommends alcohol, two parts; chloroform and bromide of ethyl, each one part.

W. A. Byrd, Quincy, Illinois (*Ther. Gaz.*,

March, 1884), has used bromide of ethyl, one part, chloroform, three parts, alcohol, four parts, in some ninety-eight cases, without a single unpleasant symptom. It has not everywhere received the same condemnation that is shown by the hesitancy to use it in this city. In spite of the bad name given it by two deaths under its use and the apparently dangerous symptoms induced by experiments upon the lower animals, its use has been revived by Chisolm (*Maryland Med. Journal*, 1882–83, ix. 388) and Prince (*St. Louis Med. and Surg. Journal*, 1883, xiv. 297), who strongly urge its use in minor operations and preliminary to the administration of ether. The last-named has reported five hundred cases in which it was used without a single unpleasant symptom.

A leading article in the *Therapeutic Gazette*, June, 1885, advocates a redistillation of a mixture of bromide of ethyl and olive oil as a valuable and safe antiseptic in labor. These facts are referred to simply to induce the profession to give this anæsthetic a fair trial in ameliorating the terrible suffering of natural labor.

Dr. MONTGOMERY exhibited a

UTERINE FIBROID POLYPUS.

Miss R., æt. 38 years, began to menstruate at seventeen years. The flow was regular, quite free, lasting a week, and was attended with pain the first three days. Ten years ago she had a hemorrhage, and subsequently several such attacks. Two years later she had a severe hemorrhage, followed by a bloody discharge continuing several months, since which time she has never been regular. The flow would occur too frequently, be very profuse, and attended with pain and loss of flesh. The symptoms were more marked during the last year. At one of the hospital clinics some years ago, the difficulty was ascribed to anteversion of the womb. Dr. Bournonville examined her three weeks ago, diagnosticated the condition fibroid polypus, and referred the case to me for treatment.

She was quite pale, lips bloodless; complained of pelvic pain, and of a constant bloody discharge, which amounted to hemorrhage upon the slightest exertion. The vagina was dilated by a tumor the size of an orange, about whose pedicle could be felt the neck of the uterus. The finger passed into the os and about the tumor without difficulty. Every examination was followed by severe hemorrhage. The pedicle was cut through by means of the wire écraseur, and the polypus removed by means of a pair of polypus-forceps. Considerable hemorrhage followed its removal. As this was not controlled by applications of hot water, a tampon saturated with a solution of subsulphate of iron was introduced. This was removed on the second day. On the fourth, her temperature ran up to 103°, she had a chill, and pains in various parts of her body. These symptoms vanished under the use of quinine, digitalis, and opium. Five weeks after the operation she appeared much improved, has had no bleeding since, her appetite and strength are greatly increased, the uterus was normal in size, the cervix still dilatable and will admit the finger with pressure. The cervical membrane was in good condition.

The tumor was the size of an orange. The mucous membrane of the lower surface was ulcerated so that vessels were ruptured, allowing hemorrhage on any exertion.

The case is of interest from the long continuance of the hemorrhage, and illustrates the importance of early and careful examination of the cavity of the uterus in cases of protracted hemorrhage.

Dr. GOODELL now seldom uses the wire for the removal of uterine polypi. He prefers traction with twisting, or enucleation by the finger. There is less bleeding, and he is afraid of "cupping" of the fundus uteri and its injury by being included in the wire loop. He had made traction with the obstetric forceps and enucleated tumors so large as to rupture the perineum, even after lateral incisions had been made in the labia. He has partially inverted the womb, enucleated the tumor, and then restored the organ to its proper form. The tumor sometimes occludes the os, and fetid pus from necrosis of the growth is imprisoned above it, giving rise to a suspicion of cancer.

Dr. BAER thinks Monsel's solution may have caused the high temperature; vinegar would have been a better hæmostatic, and it is also an antiseptic. From the appearance of the specimen, a portion of the adventitious growth seems to have been left behind, and it would be interesting to know the history of the stump.

Dr. PARISH has removed many fibroids of various sizes, and sometimes with degenerated tissues and noisome odors. The rapid recovery of Dr. Montgomery's patient was remarkable. It is much to be regretted when any portion of the tumor is left, as necrotic change is rapid and decided in such tissue, and there is danger of blood-poisoning. The pedicle, however, generally shrinks and disappears.

Dr. GOODELL remarked that this tumor appeared to be sessile and had been wholly removed. The pedicle proper is usually simply mucous membrane without adventitious tissue, and it makes very little difference if some of it is left behind, as it shrivels away and is absorbed.

Dr. ALLEN sometimes regretted that he was compelled to leave a portion of pedicle or tumor in the uterus; but he has never seen any bad consequences follow it. He prefers vinegar to iron as a hæmostatic, and considers it as good an antiseptic as carbolic acid.

Dr. MONTGOMERY remarked that the wire evidently brought away all the tumor. There

was no evidence of any remnant on examination to-day. In one case a portion of tumor or pedicle was unavoidably left, and he removed it some time afterwards by means of a tenaculum. He wounded his finger in doing so and suffered from septicæmia. The woman had an attack of cellulitis.

W. H. H. GITHENS,
Secretary.

REVIEWS AND BOOK NOTICES.

ANNUAL REPORT OF THE SUPERVISING SURGEON-GENERAL OF THE MARINE HOSPITAL SERVICE OF THE UNITED STATES FOR THE FISCAL YEAR 1884.

The report of the operations of the Marine Hospital Service for the year 1884 is contained in a volume of over three hundred pages. Forty-four thousand seven hundred and sixty-one patients received treatment during the past year,—thirteen thousand and seventy-eight were hospital patients, and thirty-one thousand six hundred and seventy-three were dispensary patients.

The expenditures for the past year were nearly five hundred thousand dollars, showing something of the importance of the service.

The hospital tax which has heretofore been the support of the Service has been abolished, and in its place support has been attempted by the receipts from the duties on tonnage. It was expected that these duties would more than cover the expenses of the Service, but a deficiency instead will amount to at least one hundred and seventy-five thousand dollars.

A very instructive decision by Judge Clarke, concerning the obligations of owners of vessels to seamen, is given. It is held that "a sailor injured in port, while in the performance of his duties as an employé of a vessel, is not obliged to go to a hospital, and that the necessary expenses for his care and treatment while injured in his lawful employment is a charge on the vessel, and the Marine Hospital Service is 'simply auxiliary' to the ancient maritime law which provides that seamen injured in the ship's service have the right to be cared for at the ship's expense."

New regulations for the government of the Service have been completed within the past year.

The physical examination of seamen can now be systematically carried on under the regulations of the Commissioner of Navigation. The Service also furnishes pilots with careful examinations for color-blindness and issues the necessary certificates. Applicants for admission into revenue marine, light-house, and life-saving stations can also receive examination by the medical officers of the Marine Hospital Service. The Surgeon-General recommends that, besides the examination for color-blindness in pilots, further examination and tests be made for acuteness of vision and hearing. This recommendation, in view of the many recent disasters caused by failure in these points, is an important one, and it is to be hoped will be approved—and carried out.

For the protection so necessary against the spread of smallpox, excellent provisions, so far as possible, have been made, and all medical officers receive abundant supplies of fresh, genuine vaccine virus.

All officers and crews of vessels can receive vaccination free of charge. This excellent provision is opposed by some steamboat captains, because it involves the loss of time in their employés incident to the sore arm which follows successful vaccination.

The perils of winter navigation are referred to, and the severe weather of last winter, which passed over so much of our country during the month of January, caused two hundred and thirteen cases of frost-bite to be treated by the Service. These cases were so severe as to require three capital operations, one each of leg, ankle, and foot, and fifteen minor amputations. The hospitals required extra supplies to accommodate the unusual number admitted on this account. This one experience must be a sufficient proof of the importance of the Service and the justice of affording every possible facility for the humane care of our fast dispersing seamen. New hospitals have been built at Cairo, Illinois, Cincinnati, Ohio, New Orleans, Louisiana, and Baltimore, Maryland.

The management of the various hospitals scattered throughout the country from Maine to California, considering the limited funds at the disposal of the Surgeon-General, requires the greatest skill and foresight, and this Dr. Hamilton has accomplished in the face of all obstacles and in a manner which deserves the highest praise. The executive ability which he has displayed in this direction at least entitles him to the confidence of the administration, and few men who had not received a military training could handle so great an undertaking successfully.

The United States Quarantine Service still remains under the officers of the Marine Hospital Service. It is in the proper management of this department that the Surgeon-General must find the greatest obstacles. The funds for carrying on this work are very limited, and the recommendations of the Surgeon-General do not meet with the prompt attention that they should. Untiring energy and skill have been used to make this extra duty successful, and much good has been accomplished. It is hoped that another year this department will be more efficient, and that all the recommendations of Dr. Hamilton will be adopted. The system of reports from foreign countries is carefully carried out, and is of great value. In the present outbreak in

Canada, the value of a trained Quarantine Service is readily recognized. The work of the Service is a direct benefit to our feeble commerce, and if any hope of renewed life exists the importance of the Marine Hospital Service must increase. In no case can it diminish, and to fortify those who are now skilled in its management is an act of simple justice.

The Report contains valuable statistical matter occupying over sixty pages, followed by an interesting report of surgical operations and selected cases from hospital practice. Drs. Austin, Bryan, Armstrong, and Stewart contribute some very important papers. There is also a section of reports of fatal cases with autopsies, and a very instructive chapter on "Yellow-Fever Epidemics." A report on the sanitary condition of Vera Cruz, Mexico, by Dr. Mainegra, and another on Pensacola and vicinity by Dr. Bouvier, are also very instructive. Some reports from United States consuls on the European cholera epidemic of 1884 close the volume.

The Report, on the whole, is excellent, and a credit to the Supervising Surgeon-General, who has worked so faithfully to elevate the Service and make its operations valuable and efficient. W. T. P.

A System of Practical Medicine by American Authors. Edited by William Pepper, M.D., etc.; assisted by Louis Starr, M.D. Volume III.—Diseases of the Respiratory, Circulatory, and Hæmatopoietic Systems. Philadelphia, Lea Brothers & Co., 1885. 8vo, sheep. Pp. 1032.

This volume is more comprehensive, and, as a rule, the individual articles which it contains are more compendious, than some of those which have previously been issued.

It contains articles from twenty-seven contributors upon forty-five subjects: twenty-nine upon diseases of the respiratory system; twelve upon diseases of the circulatory system; and four upon diseases of the blood and hæmatopoietic system. Two posthumous articles appear from the pen of the late Prof. Elsberg, upon diseases of the larynx and trachea respectively.

Among the papers especially deserving mention are those by Austin Flint, M.D., on "Pulmonary Phthisis (Fibroid Phthisis, or Chronic Interstitial Pneumonia);" by Harrison Allen, M.D., on "Diseases of the Nasal Passages;" by Carl Seiler, M.D., on "Laryngoscopy and Rhinoscopy;" by Abraham Jacobi, M.D., articles on "Acute Catarrhal Laryngitis" and "Pseudo-Membranous Laryngitis;" by N. S. Davis, M.D., on "Diseases of the Bronchi;" by Alfred Loomis, M.D., on "Croupous Pneumonia;" by Frank Donaldson, M.D., on "Diseases of the Pleura;" by E. T. Bruen, M.D., on "Syphilitic Diseases of the Lung, Pneumokoniosis, Cancer and Hydatids of the Lung;" and by the editor, on "Croupous Pneumonia." Among those upon Disorders of the Circulatory Apparatus are to be found contributions by J. M. Da Costa, M.D., on "Diseases of the Pericardium;" by Alfred L. Loomis, M.D., on "Endocarditis and Cardiac Valvular Disease;" by William Osler, M.D., on "Diseases of the Substance of the Heart;" by Morris Longstreth, M.D., on "Cyanosis and Congenital Anomalies;" by Beverly Robinson, M.D., on "Cardiac Thrombosis;" by Austin Flint, M.D., on "Neuroses of the Heart;" by John B. Roberts, M.D., on "The Operative Treatment of Pericardial Effusions;" by Andrew H. Smith, M.D., on "Diseases of the Veins, and on the Caisson Disease;" by G. M. Garland, M.D., on "Diseases of the Aorta;" by Elbridge G. Cutler, M.D., on "Diseases of the Coronary and other Arteries;" and by E. T. Bruen, M.D., upon "Diseases of the Mediastinum."

The third series of articles are upon "Diseases of the Blood and Blood-Glandular System," by William Osler, M.D.; on "Diseases of the Spleen," by I. E. Atkinson, M.D.; on "Diseases of the Thyroid Gland," by D. Hayes Agnew, M.D.; and on "Simple Lymphangitis," by Samuel C. Busey, M.D. A Table of Contents and a good Index are contained in the volume.

In the article by Dr. W. H. Geddings on "Hay-Asthma," which otherwise is an excellent *résumé* of the subject, it seems strange to find no mention whatever of the work of Mackenzie of Baltimore or of Sajous of Philadelphia, who have probably done more than any others towards placing the operative treatment of the affection upon a scientific basis. In several of the articles the terminology of the United States Pharmacopœia is not always adhered to; but, in mentioning such small oversights, we merely emphasize the expression of the general excellence of the work, a complete review of which would require more space than we have at our command. The book is uniform with the others, which in typography and press-work are all that can be desired. F. W.

A Treatise on Practical Chemistry and Qualitative Inorganic Analysis. By Frank Clowes, D.Sc. Third American, from the fourth English edition. 14+376 pp. 12mo. Philadelphia, Lea Brothers & Co.

For the third American edition of a laboratory guide which has met with much favor in this country, the author has prepared a special preface. The book has been enlarged, and is arranged in seven sections. I., the preparation and use of apparatus; II., experiments illustrating the preparation and properties of certain gases and liquids; III., analytical operations; IV., analytical reactions; V., analysis of simple substances containing one metal and one acid radical; VI., full analytical course and tables; VII., laboratory fittings, apparatus, chemicals, and reagents.

The plan is good, and the new edition is unquestionably an improvement, but there are some grave errors in logical sequence,—the first requisite of an elementary book. What idea can the student form of chemical equations until some information of the notation involved in those equations is imparted? Yet, on page 16, we learn that oxygen is set free "as shown by the following equation," and equations are freely used in Section II., although chemical notation is not mentioned before page 73, in Section IV. On page 94 we are told that "the dashes following the symbol (Fe) denote the number of chlorine atoms, or their equivalent, which are combined with one atom of Fe in its compounds," but we look vainly for the import of "the equivalent" of chlorine atoms.

The analytical methods given are usually good, and a pupil having a previous knowledge of general chemistry or a good teacher may make fair progress by the aid of the book, but it is hardly adapted as a text-book for beginners who must learn only by personal experience.

Section VII., on Laboratory Fittings, contains much useful information and valuable hints for teachers and laboratory directors.

W. H. G.

NEW BOOKS.

LESSONS IN HYGIENE. An Elementary Text-Book on the Maintenance of Health. With the Rudiments of Anatomy and Physiology, and the Treatment of Emergent Cases. Comprising also Lessons on the Action of Stimulants and Sedatives on the Brain and Nervous System. Adapted for Common Schools. By JOHN C. CUTTER, B.S., M.D. Illustrated. Philadelphia, J. B. Lippincott Company. 1885. Pp. 180.

VON ZIEMSSEN'S HAND-BOOK OF GENERAL THERAPEUTICS. In Seven Volumes. Vol. I. Introduction by PROFESSOR H. VON ZIEMSSEN. On the Dietary of the Sick and Dietetic Methods of Treatment. By PROFESSOR J. BAUER. On the Koumiss Cure. By DR. STANGE. Translated from the German by EDWARD F. WILLOUGHBY, M.D. (Lond.). New York, William Wood & Co., 56 and 58 Lafayette Place. 1885. Pp. 408.

Vol. II. Antipyretic Methods of Treatment. By PROFESSOR TH. JÜRGESSEN. Epidermic, Endermic, and Hypodermic Administration of Medicines. By PROFESSOR A. EULENBURG. With Twelve Illustrations. Translated by MATTHEW HAY, M.D., of Aberdeen. Pp. 511.

Vol. III. Respiratory Therapeutics. By PROFESSOR M. J. OERTEL, M.D., of Munich. Translated by J. BURNEY YEO, M.D. Pp. 769.

A TEXT-BOOK OF MEDICAL PHYSICS. For the Use of Students and Practitioners of Medicine. By JOHN C. DRAPER, M.D., LL.D. With Three Hundred and Seventy-seven Illustrations. Philadelphia, Lea Brothers & Co. 1885. Pp. 733.

THE TEN LAWS OF HEALTH; OR, HOW DISEASES ARE PRODUCED AND PREVENTED; AND FAMILY GUIDE TO PROTECTION AGAINST EPIDEMIC DISEASES AND OTHER DANGEROUS INFECTIONS. By J. R. BLACK, M.D. Philadelphia, J. B. Lippincott Company. 1885. Pp. 413.

POISONS: THEIR EFFECTS AND DETECTION. A Manual for the Use of Analytical Chemists and Experts. With Introductory Essay on the Growth of Modern Toxicology. By ALEXANDER WYNTER BLYTH, M.D., etc. With Tables and Illustrations. Vols. I. and II. New York, William Wood & Co., 56 and 58 Lafayette Place. 1885. Pp. 333—668.

A TREATISE ON ASIATIC CHOLERA. Edited and Prepared by EDMUND CHARLES WENDT, M.D., in association with DRS. JOHN C. PETERS, of New York; ELY MCCLELLAN, U.S.A.; JOHN B. HAMILTON, Surgeon-General United States Marine Hospital Service; and GEORGE M. STERNBERG, U.S.A. Illustrated with Maps and Engravings. New York, William Wood & Co., 56 and 58 Lafayette Place. 1885. Pp. 403.

ON RENAL AND URINARY AFFECTIONS. By W. HOWSHIP DICKINSON, M.D., etc. Miscellaneous Affections of the Kidneys and Urine. New York, William Wood & Co., 56 and 58 Lafayette Place. 1885. Pp. 343.

CANCER: A STUDY OF THREE HUNDRED AND NINETY-SEVEN CASES OF CANCER OF THE FEMALE BREAST. WITH CLINICAL OBSERVATIONS. By WILLARD PARKER, M.D. New York and London, G. P. Putnam's Sons. 1885. Pp. 61.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM, ESPECIALLY IN WOMEN. By S. WEIR MITCHELL, M.D. Second Edition, Revised and Enlarged. With Five Plates. Philadelphia, Lea Brothers & Co. 1885. Pp. 283.

SECOND REPORT OF THE STATE BOARD OF HEALTH OF THE STATE OF TENNESSEE. October, 1880—December, 1884. Published by Authority. Nashville. 1885. Pp. 570.

INEBRIISM: A PATHOLOGICAL AND PSYCHOLOGICAL STUDY. By T. L. WRIGHT, M.D. Columbus, Ohio, William G. Hubbard. 1885. Pp. 222.

LARYNGOSCOPY AND RHINOSCOPY IN THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE THROAT AND NOSE. By PROSSER JAMES, M.D. Fourth Edition, Enlarged. Illustrated with Hand-Colored Plates. New York, William Wood & Co., 56 and 58 Lafayette Place. 1885. Pp 223.

MEDICAL THOUGHTS OF SHAKESPEARE. By B. RUSH FIELD, M.D. Second Edition. Revised and Enlarged. Easton, Pennsylvania, Andrews & Clifton, Publishers. 1885. Pp. 86.

AN INTRODUCTION TO THE STUDY OF THE DISEASES OF THE NERVOUS SYSTEM: BEING LECTURES DELIVERED IN THE UNIVERSITY OF EDINBURGH DURING THE TERCENTENARY YEAR. By THOMAS GRAINGER STEWART, M.D. Philadelphia, J. B. Lippincott Company. 1885. Pp. 237.

A TREATISE ON NERVOUS DISEASES; THEIR SYMPTOMS AND TREATMENT. A Text-Book for Students and Practitioners. By SAMUEL G. WEBBER, M.D., etc. New York, D. Appleton & Co., 1, 3, and 5 Bond Street. 1885. Pp. 415.

TRACHEOTOMY IN LARYNGEAL DIPHTHERIA; AFTER-TREATMENT AND COMPLICATIONS. By ROBERT WILLIAM PARKER, M.D. Second Edition, Revised and Considerably Enlarged. London, H. K. Lewis, 136 Gower Street, W.C. 1885. Pp. 124.

URINARY AND RENAL DERANGEMENTS, AND CALCULOUS DISORDERS. HINTS ON DIAGNOSIS AND TREATMENT. By LIONEL S. BEALE, M.D. Philadelphia, P. Blakiston, Son & Co., 1012 Walnut Street. 1885. Pp. 356.

BERLIN AS A MEDICAL CENTRE: A GUIDE FOR AMERICAN PRACTITIONERS AND STUDENTS. By HORATIO R. BIGELOW, M.D., etc. (Reprinted from the *New England Medical Monthly*.) Sandy Hook, Connecticut. New England Publishing Company. 1885. Pp. 117.

A TREATISE ON PRACTICAL CHEMISTRY AND QUALITATIVE INORGANIC ANALYSIS. Adapted for Use in the Laboratories of Colleges and Schools. By FRANK CLOWES, D.Sc. Lond. With Illustrations. From the Fourth English Edition. Philadelphia, Lea, Brothers & Co. 1885. Pp. 376.

THE TREATMENT OF OPIUM-ADDICTION. By J. B. MATTISON, M.D. New York and London, G. P. Putnam's Sons. 1885. Pp. 49.

ELEMENTS OF MODERN MEDICINE; INCLUDING PRINCIPLES OF PATHOLOGY AND THERAPEUTICS. WITH MANY USEFUL MEMORANDA AND VALUABLE TABLES FOR REFERENCE. Designed for the Use of Students and Practitioners of Medicine. By R. FRENCH STONE, M.D. New York, D. Appleton & Co., 1, 3, and 5 Bond Street. 1885. Pp. 368.

A GUIDE TO SANITARY HOUSE-INSPECTION: OR, HINTS AND HELPS REGARDING THE CHOICE OF A HEALTHFUL HOME IN CITY OR COUNTRY. By WILLIAM PAUL GERHARD, C.E. New York, John Wiley & Sons. 1885. Pp. 138.

THE USE OF THE MICROSCOPE IN CLINICAL AND PATHOLOGICAL EXAMINATIONS. By Dr. CARL FRIEDLANDER. Second Edition, Enlarged and Improved, with Chromo-Lithograph. Translated, with Permission of the Author, by HENRY C. COE, M.D. New York, D. Appleton & Co., 1, 3, and 5 Bond Street. 1885. Pp. 195.

MASSACHUSETTS EMERGENCY AND HYGIENIC ASSOCIATION. Six Lectures upon School Hygiene. Delivered, under the Auspices of the Massachusetts Emergency and Hygienic Association, to Teachers in the Public Schools. Boston. Published by Guire & Co. 1885. Pp. 193.

NEW REMEDIES AND CLINICAL NOTES.

IODOFORM COLLODION IN NEURALGIAS.—Dr. William Browning, of Brooklyn, in the October number of *The American Journal of the Medical Sciences*, gives his experience with this remedy for external application, together with notes on the preparation itself, and a brief study of its action. The strength usually employed is one part of iodoform to fifteen of collodion. A half-ounce is usually sufficient for any ordinary single application. Dr. Browning has found it most effective when painted on in very thick layers, which may be conveniently done with the usual camel's-hair brush. As soon as one coating becomes a little firm another is applied, and so on until it appears to have an average thickness of half a millimetre. In the neuralgic cases a cure, when effected, was usually accomplished with one or two applications.

The class of troubles found most amenable to this treatment was narrowly localized neuralgias, especially when corresponding to some particular nerve and not dependent on any demonstrable lesion. In fact, if a neuralgia, or what is thought to be one, proves intractable to this means, we should doubt its being a purely functional affection, and look carefully for some tangible cause. It has thus a certain diagnostic, as well as a therapeutic, value. Several times its complete or partial failure has led to a more searching and successful examination. Even in such cases much temporary relief is often afforded.

Supraorbital neuralgias, even of malarial origin, particularly if the miasmatic infection dates back some time, seem quite amenable to this treatment. Of course it is not recommended as a substitute for quinine here, but only as an adjuvant where the latter fails or acts too slowly.

EFFECTS OF PEPSIN IN LARGE DOSES.—Dr. Rassmann reports to the *Medical Record* (p. 346) the case of a man suffering with dyspepsia, for whom pepsin was ordered, fifteen grains after each meal, to be taken with a dose of hydrochloric acid. The patient, in order to test the effects of the remedy, took twenty powders, or five drachms of pepsin, in one dose, just before retiring. The effects are thus described:

"In about an hour he was seized with an intense burning pain in the epigastrium, accompanied by nausea, and three hours later with violent colicky pains and diarrhœa. These symptoms continued until nearly noon of the following day, when they disappeared, leaving only a moderate amount of nausea, burning in the epigastrium, and a feeling of exhaustion. There was no vomiting. . . . . Nothing had been taken to counteract the effects of the drug. The pepsin had been procured from a reliable apothecary, and there was no reason to suspect that it was not pure and of full strength. The solution of hydrochloric acid was not touched."

[Although not so stated, it was, in all probability, saccharated pepsin which was taken. It would have been interesting to determine how long the preparation of pepsin had been made, and also to have had some of the pepsin examined, to detect possible adulteration or the presence of ptomaines.]

HYDRONAPHTHOL: A NEW ANTISEPTIC.—Dr. George R. Fowler, in a communication to the *New York Medical Journal*, speaks highly of hydronaphthol as an antiseptic agent, which in efficiency is only surpassed by mercury bichloride. It is soluble in cold water to the extent of one part in two thousand, in which strength it will not destroy germs, but it prevents the development of spores. From some comparative experiments, it was determined that "as an antiseptic it is about one-fifth as powerful as the mercury bichloride; from one and a half to double the strength of iodine; four times as strong as sulphuric acid; at least twelve times as efficient as carbolic acid; thirty times as potent as salicylic acid, when sodium biborate is added to the latter (for the purpose of increasing its solubility) in the proportion of equal parts of each; thirty times as powerful as both boric acid and ferric sulphate; sixty times as strong as sodium biborate; and six hundred times as strong as alcohol."

Hydronaphthol solution may be used for irrigation in the spray, and for washing instruments and the hands of the surgeon, and with wood-wool, sawdust, and other dressings. The crystals are soft and have especial advantages for making antiseptic gauze, and a good substitute for iodoform, as a dressing-powder, is obtained by adding hydronaphthol to magnesium carbonate in the proportion of two to one hundred.

STRYCHNINE IN SPINAL AFFECTIONS.—Dr. Landon Carter Gray, in the October number of *The American Journal of the Medical Sciences*, reports five cases which, as far as they go, demonstrate that strychnine was not well borne by two cases of severe acute myelitis, or by two subacute cases of mild poliomyelitis anterior; that one-twenty-fifth of a grain, continued for four days in a case of trans-

verse myelitis with early extension to the lateral columns, given three months after onset, suddenly induced alarming toxic symptoms; that one chronic case of general myelitis of traumatic origin was greatly benefited, as was also a case of general myelitis in which the onset had been gradual; that in five cases of progressive muscular atrophy it acted as a remarkable stimulant; that, as Dr. Weir Mitchell has indicated, it was decidedly beneficial in cases of neurasthenia, which, after being treated by some eight to ten weeks of rest and forced feeding, were taken out of bed, although it failed to agree with three cases of neurasthenia treated in the ordinary way.

Effects of a Large Dose of Tincture of Digitalis.—A woman swallowed three fluidounces of tincture of digitalis. Within a few minutes intense vomiting set in and a large portion of the drug was rejected, this being aided by emetics administered at the Hôpital Saint-Louis, where the patient was at once carried. Subsequently two sets of symptoms appeared: those attributable to gastric irritation (vomiting, pain), and those manifested in the circulation (irregularity and slowness of the pulse, violent delirium, cutaneous hyperæsthesia, muscular hemiparesis, vertigo, amblyopia, and xanthopsia). The treatment was stimulating: hypodermic injections of ether, ammonium carbonate, strychnine, and, later, frictions, electricity, atropine, and a carefully regulated diet. Recovery was complete on the eighth day.—*Le Concour Médical* and *Med. and Surg. Rep.*

Chloroform for Tape-Worm. — After failing with male fern, Dr. Perry, of San Francisco, in the case of a man who had suffered with tape-worm for eight years, succeeded in dislodging it in the following manner: The patient was made to fast from noon of the preceding day, and only permitted to drink lemonade. At seven o'clock in the morning he took one drachm of chloroform in one ounce of mucilage, and one hour later an ounce of castor oil. The patient was in considerable stupor shortly after taking the medicine, which stupor lasted three or four hours. He was a large man, weighing one hundred and eighty pounds. Dr. Perry thinks that the dose of one drachm of chloroform should not be exceeded.

Chloral in Tetanus Infantum.—In the *Dublin Journal of Medical Science* for September, Mr. Henry May reports a case of convulsions occurring on the seventh day after birth of a female child who at birth had been a strong, healthy infant. Cause of convulsions unknown. The treatment was as follows: the food consisted of a teaspoonful of brandy, one-third of a teacupful of fresh cow's milk mixed with two-thirds of warm water, slightly sweetened. Of this the mother managed to give about three teacupfuls in the twenty-four hours, and a teaspoonful of the following was ordered every third hour:

℞ Chloral. hydratis,
Potass. bromid., āā gr. xvj;
Ext. ergot. liq. (Sorg's), ℥xlviij;
Glycerini, ʒiij;
Aquæ destillatæ, ad fʒiv. M.
Fiat mistura.

The treatment was continued, though less actively as the symptoms improved, for fourteen days, when the child took the breast again and afterwards gradually recovered.

Aquapuncture as a Substitute for Injections of Cocaine.—Dr. W. T. Halstead reminds us of the fact that has recently been lost sight of, that the skin can be anæsthetized by subcutaneous injections of water, and he has used it for local anæsthesia as a substitute for cocaine in minor surgical operations. The anæsthetic effect is limited to the boundary of the original bloodless wheal, but does not always vanish as soon as hyperæmia supervenes.—*N. Y. Med. Journal.*

Boroglyceride in Psoriasis.—Dr. Chas. Roberts, in an irritable and obstinate case of psoriasis, used boroglyceride locally with very gratifying results, and has since used it in other cases with the same effect.—*Brit. Med. Journal.*

Wiring Bones.—An ingenious modification of the procedure and some new instruments for wiring bones together are described in a communication to the *Medical Record* for September 26, by William F. Fluhrer, M.D.

MISCELLANY.

Messrs. Parke, Davis & Co. announce that they will furnish a collection of all crude drugs of vegetable origin recognized in the United States Pharmacopœia, and, in addition, some unofficinal remedies in common use. The specimens number two hundred and eighty-eight in all, contained in a black walnut case, in wooden boxes, each bearing a label with its number, by which it can be identified in the alphabetically-arranged index. If the manufacturers receive orders from a sufficient number (fifty subscribers), they will furnish these cabinets at ten dollars apiece.

As a help to the study of materia medica and pharmacognosy, this collection would be of great value to students.

Drs. W. H. Warder and E. E. Montgomery have opened a private hospital for diseases of women at 1409 Thompson Street, Philadelphia.

NOTES AND QUERIES.

NOTICE TO OCULISTS AND PUBLISHERS ON OCULISTIC MATTERS.

Having taken charge of reporting for the *Revue Générale d'Ophthalmologie*, edited by Dr. E. Meyer, of Paris, and Dr. Dor, of Lyon, on the progress of ophthalmology in our country, I beg leave to request all authors and publishers of ophthalmic works and papers to send me copies or reprints of their respective publications, in order to enable me to give the most complete review of the current ophthalmic literature of this country in a periodical of the largest circulation among our profession. (Medical papers please copy.)

DR. M. LANDESBERG,
40 West Thirty-fourth Street, New York.

OBITUARY.

JOHN LIGHT ATLEE, M.D., one of the few ex-Presidents of the American Medical Association, and one of the most distinguished physicians of this country, died at his home in Lancaster, in this State, on the 1st inst., from an attack of pleurisy, after having been rendered almost an invalid from an attack of hemiplegia which occurred about two years ago.

Dr. Atlee was born in Lancaster, November 2, 1799, and was the son of Colonel William Pitt Atlee, of Revolutionary fame. He was graduated from the University of Pennsylvania in 1820, after five years' course of study. In his address as President of the American Medical Association, delivered in Cleveland two years ago, he gave many interesting reminiscences of the profession and medical teaching in Philadelphia in the first quarter of this century. In a long and useful life devoted to his profession, Dr. Atlee, although practising in his native city, acquired a reputation that was more than national. He was one of the originators of the Lancaster City and County Medical Society in 1843, and twice was its presiding officer. He assisted in forming the Pennsylvania State Medical Society in 1848, and was active in the organization, in 1847, of the American Medical Association, in each of which he was honored by being elected to the highest office.

Always warmly interested in matters of education, he was for forty years a school director, and a trustee of Franklin and Marshall College, in which institution he also filled the Chair of Professor of Anatomy and Physiology for many years. He was President of the Board of Trustees of the Home for Friendless Children, and of the State Lunatic Asylum at Harrisburg. He was a member of a number of scientific societies, including the American Gynæcological Association and the College of Physicians of Philadelphia. In co-operation with his eminent brother, Dr. Washington L. Atlee, he labored successfully in establishing the operation of ovariotomy upon a firm foundation, and in 1843 performed the first operation of double ovariotomy upon a patient who survives him. As a surgeon he was skilful and successful, and had won a well-earned reputation in the surgery of the abdomen before modern methods, with their rigid rules, had been devised. Dr. Atlee was not a frequent contributor to medical journalism, but this was attributable to his great modesty, and not to want of ability as a writer or lack of material and opportunity for observation.

Dr. Atlee was married, in 1822, to the eldest daughter of Hon. Walter Franklin, president judge of the courts of Lancaster and York Counties. His son, Walter F. Atlee, is a resident of Philadelphia.

Dr. John L. Atlee was a man with high ideals of duty, integrity, and professional honor. He served his generation well, and "bore without reproach the grand old name of gentleman."

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM SEPTEMBER 27, 1885, *TO OCTOBER* 10, 1885.

COLONEL T. A. MCPARLIN, SURGEON.—Directed to transfer his duties, and the public funds for which he is accountable as assistant medical purveyor, to Captain Henry Johnson, Medical Storekeeper, who will, in addition to his present duties, temporarily perform the duties of assistant medical purveyor, New York City. S. O. 223, A. G. O., September 29, 1885.

MAJOR D. G. CALDWELL, SURGEON.—Ordered from Fort Laramie, Wyoming, to Fort D. A. Russell, Wyoming. S. O. 97, Department of the Platte, September 28, 1885.

CAPTAIN J. H. BARTHOLF, ASSISTANT-SURGEON.—Ordered from Fort Ringgold, Texas, to Fort McIntosh, Texas, for duty as post-surgeon. S. O. 125, Department of Texas, September 28, 1885.

CAPTAIN DANIEL WEISEL, ASSISTANT-SURGEON.—To be relieved from duty at Camp at Rock Springs, Wyoming, and return to his proper station, Fort Fred Steele, Wyoming. S. O. 99, Department of the Platte, October 1, 1885.

CAPTAIN G. W. ADAIR, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 232, A. G. O., October 9, 1885.

CAPTAIN VICTOR BIART, ASSISTANT-SURGEON.—Sick-leave of absence further extended six months, on surgeon's certificate of disability. S. O. 227, A. G. O., October 3, 1885.

CAPTAIN LOUIS BRECHEMIN, ASSISTANT-SURGEON.—Ordered from Fort D. A. Russell, Wyoming, to Fort Laramie, Wyoming. S. O. 97, Department of the Platte, September 28, 1885.

FIRST-LIEUTENANT G. E. BUSHNELL, ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 215, Department of the East, October 6, 1885.

FIRST-LIEUTENANT C. N. B. MACAULEY, ASSISTANT-SURGEON.—Relieved from duty at Fort A. Lincoln, Dakota Territory, and ordered for duty at Camp Poplar River, Montana Territory.

FIRST-LIEUTENANT WILLIAM L. KNEEDLER, ASSISTANT-SURGEON.—When relieved from duty at Camp Poplar River, Montana Territory, by Assistant-Surgeon Macauley, to report to commanding officer, Fort Snelling, Minnesota, for duty.

S. O. 105, Department of Dakota, September 21, 1885.

FIRST-LIEUTENANT WILLIAM STEPHENSON, ASSISTANT-SURGEON.—Relieved from duty at Fort Niobrara, Nebraska, and ordered for duty at Camp at Rock Springs, Wyoming. S. O. 99, Department of the Platte, October 1, 1885.

FIRST-LIEUTENANT A. R. CHAPIN, ASSISTANT-SURGEON.—Leave of absence extended one month. S. O. 230, A. G. O., October 7, 1885.

FIRST-LIEUTENANT P. G. WALES, ASSISTANT-SURGEON.—Relieved from temporary duty at Boise Barracks, and ordered for duty at Fort Cœur d'Alene, Idaho. S. O. 160, Department of Colorado, September 21, 1885.

FIRST-LIEUTENANT C. B. EWING, ASSISTANT-SURGEON.—Relieved from duty at Fort Stanton, New Mexico, and ordered for duty at Fort Leavenworth, Kansas. S. O. 147, Department of Missouri, September 25, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM SEPTEMBER 27, 1885, *TO OCTOBER* 10, 1885.

SURGEON WILLIAM H. JONES.—To Navy-Yard, League Island, Pennsylvania, October 15, as the relief of Medical-Inspector M. Bradley.

MEDICAL-INSPECTOR MICHAEL BRADLEY.—Detached from Navy-Yard, League Island, Pennsylvania, October 15, and placed on waiting orders.

ASSISTANT-SURGEON THOMAS OWENS.—To Naval Station, New London, Connecticut, as the relief of Surgeon William A. Corwin.

SURGEON WILLIAM A. CORWIN.—Detached from Naval Station, New London, Connecticut, and ordered to the U.S.S. "Adams" October 31.

SURGEON A. F. MAGRUDER.—Ordered to the U.S.S. "Yantic" without delay, as the relief of Surgeon H. L. Law.

SURGEON H. L. LAW.—Detached from the U.S.S. "Yantic," and wait orders.

SURGEON W. J. SIMON.—Detached from the Naval Academy October 1, and wait orders.

SURGEON M. C. DRENNAN.—Detached from the Naval Academy October 1, and wait orders.

PASSED ASSISTANT-SURGEON ARTHUR G. CABELL.—To the U.S.S. "Adams," October 31.

SURGEON GEORGE A. BRIGHT.—To U.S.S. "Brooklyn."

ASSISTANT-SURGEON HENRY B. FITTS.—To Naval Hospital, New York.

PASSED ASSISTANT-SURGEON JOHN H. HALL.—Detached from Naval Hospital, Mare Island, California, and ordered to the "Hartford."

PASSED ASSISTANT-SURGEON ROBERT SWAN.—Detached from Naval Hospital, New York, and ordered to the "Brooklyn."

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, OCTOBER 31, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON THE VARIOUS FORMS OF SCLEROSIS OF THE SPINAL CORD.

Delivered at the Hospital of the University of Pennsylvania

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of, and Professor of the Theory and Practice of Medicine and of Clinical Medicine in, the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—I propose to devote the hour to the study of sclerosis of the spinal cord, of which there are three principal varieties. The first that I shall consider is sclerosis of the lateral columns, or antero-lateral sclerosis. Where the sclerosis of the lateral columns extends into the gray matter so as to involve the nerve-cells, and is associated with muscular atrophy, it produces the affection known as amyotrophic lateral sclerosis, which, however, is simply a complication of lateral sclerosis. The second variety is where the sclerosis is not limited to one column, but occurs in patches scattered irregularly throughout the cord, and sometimes extending into the brain. This is disseminated, insular, or cerebro-spinal sclerosis. The third variety is sclerosis of the posterior columns, or, as it is often termed, from its characteristic phenomenon, progressive locomotor ataxia.

Sclerosis, as you are aware, is a morbid change in the nerve-substance, attended with a breaking down and atrophy of the nerve-fibres, with overgrowth of the interstitial connective tissue. Sclerosis is on the border-line between chronic inflammation and degeneration. The sclerosed parts are grayish, somewhat translucent, and rather smaller than normal.

The causes of sclerosis of the spinal cord are exposure to wet and cold, prolonged overtaxing of the nervous system, particularly of the spinal cord, and excesses in venery. Syphilis is a common cause of sclerosis, and perhaps more particularly disposes to posterior sclerosis; but I warn you not to think in every case of sclerosis, even where there is a history of syphilis, that syphilis is the essential cause of the sclerosis, since the other causes of sclerosis may operate as readily in a person with constitutional syphilis as in one who has not this taint. Sclerosis may also be produced by the extension of a neuritis. The peripheral nerves may become the seat of inflammation, which, creeping upward, invades the cord and lights up a slow process of chronic inflammation and degeneration, ending in sclerosis.

The symptoms of sclerosis of the spinal cord are best studied under the three heads already given. The symptoms of lateral sclerosis are, in the first place, progressive loss of power, not amounting to complete palsy. In the second place, muscular tremor, particularly when the muscles are thrown into action. With this there is muscular twitching and a disposition to contraction. In the third place, increase in the reflex irritability, which may be tested by the knee-jerk. There is also increase in the electro-muscular irritability. Ordinary sensation is not affected. The patient's gait is peculiar, on account of the rigidity of the muscles, but he can walk as well with his eyes shut as with them open. There are no pains connected with this affection, neither darting pains nor the girdle sensation.

The patient now before us illustrates this form of sclerosis. The following history has been obtained:

H. S., aged 28 years, single, is an engineer by occupation, and had been working on a railroad in Wyoming Territory until three or four months ago, when he came to this city. When a child he had diphtheria, which was followed by dropsy and paralysis. Later he was thrown on a hot stove and severely burned, the scar being visible on the epigastrium. When twenty-two years of age he had typhoid fever. He denies having had gonorrhœa or syphilis, although intercourse with loose women is acknowledged. Careful investigation fails to reveal any trace of specific infection. He has used alcohol in considerable quantities, but has never been intoxicated. He uses tobacco in great excess, smoking as many as fifteen cigars on some days, and chewing a large plug of tobacco every twenty-four hours.

His occupation has been an exposing one, subjecting him to extreme alternations of heat and cold. He, however, continued in good health until three years ago. In December, 1882, he first noticed a gradual loss of power in the left ankle. He states that five months prior to this he had injured the left ankle and knee by falling from his locomotive. This kept him in bed for seven days, then ap-

parently became entirely well. This feeling of weakness on the left side compelled him to throw most of his weight on the right leg. The trouble gradually grew worse, and in November, 1883, he noticed that occasionally the affected leg would suddenly fly backward when he attempted to move it, and that the muscles of the left side would tremble violently in a quick clonic spasm. Unless he moved very carefully, this occurred at every step. He next observed that he was losing flesh. His height is six feet one and one-half inches, and his best weight has been one hundred and seventy-nine pounds. Three months ago, when this note was made, he weighed one hundred and sixty-five pounds.

In July, 1884, the affected ankle was strained, and this was followed by swelling of the foot and leg. About this time, or a little earlier, he noticed that the fingers of the left hand were disposed to contract, so that the hand would remain closed until the fingers were forcibly extended. The contraction was increased by fatigue. This gradually grew worse, until it involved the hand, forearm, arm, and shoulder. All the muscles of the arm would quiver when he became tired from exhaustion. In addition, he had a peculiar numbness or tingling over the left side. This is sometimes described as the feeling of pins and needles, and is frequently complained of by patients with nervous affections, particularly when the spinal cord is involved. Some days the patient feels better than on others, and is able at times to walk two or three squares.

During all this time the man has had no severe pain, although he has had occasional vague pains in various parts of the body; but there has been no fixed pain, and no darting, severe, sharp pain, nor has he had any sense of constriction about any part of the chest. His memory is good, and he sleeps well. The appetite is sometimes rather poor, although at times voracious; then he overloads the stomach, and suffers with vomiting. The bowels are constipated. He has occasional palpitation of the heart. The heart beats rather actively, but somewhat irregularly, losing a beat in every ten or fifteen pulsations. The second sound is accentuated, but there is no distinct murmur. There is a trace of albumen in the urine, very slight, however, and diminishing. There are no tube-casts, but a few pus-cells with epithelium from the bladder, so that I regard the albumen as due to the admixture of a little pus with the urine, and not as an indication of renal disease.

There is a little wasting of the muscles of the left side. The following measurements have been taken:

	Right. Inches.	Left. Inches.
Calf	14½	14
Forearm . . .	11¼	11
Biceps . . .	11¼	11¼
Thigh	19	18

When the left biceps is contracted it is not nearly as prominent as the right muscle. There is then a slight diminution in the size of the right side; but when we remember that the man has been throwing his weight on the right leg, and has been using the right arm more frequently than the left, this wasting is no more than would be expected.

Let us note his condition to-day. His right side has not been involved, but he now states that lately there have been shooting pains in the right arm and leg, and that there is some slight twitching of the fingers of the right side. Examining the left arm, we find that there is almost complete paralysis of the shoulder-muscles. The biceps has some power, but the triceps has very little. The extensor of the little finger responds, but the common extensor is almost completely paralyzed. There is more power in the flexors, but this is much impaired. Looking at the muscles of the thigh, we see a marked quivering or fibrillary contraction.

Another marked symptom in this case has been the tendency of the muscles to jerk, so that unless great care were exercised there would be a sudden drawing back of the muscles of the leg when he attempted to advance the foot. This is connected with an increased irritability of the muscle. This, for convenience, is studied by examining the patellar reflex, or, preferably, the knee-jerk. In the normal limb the foot is thrown out when the tendon of the ligamentum patellæ is struck. This is connected with a reflex process, the sensation being transmitted to a segment of the spinal cord, and thence an impulse is carried to the muscles, causing movement. The preservation of the knee-jerk is an evidence of the integrity of this reflex loop from the knee to the spinal cord, and out again to the muscles. It therefore serves as a diagnostic sign of the condition of the spinal cord up to a certain level. There are other reflexes by which the condition of the cord at different levels may be tested. In this man there is a distinct increase in the knee-jerk on the right side, and on the left side it is even more increased.

We have, then, in this man progressive loss of power, unilateral, without affection of the head; fibrillar contractions and tremor of the muscles when they are thrown into action; increased irritability of the muscles, as shown by exaggerated

reflexes; a tendency to contraction; very slight atrophy of the muscles, and a feeling of numbness in the affected part. This affection has been progressive, beginning in the ankle and extending thence to other portions of the left side, and there is now reason to fear that the right side is becoming affected.

I regard this as a case of progressive sclerosis of the antero-lateral columns of the cord, affecting the left side and now extending to the right.

When the sclerosis extends into the gray matter, atrophy is added to the symptoms already mentioned. This, as I have said, constitutes amyotrophic lateral sclerosis. It not infrequently happens that the affection extends upward, involving the pons, and there are then associated symptoms of paralysis of the labio-glosso-laryngeal type, with difficulty of swallowing and failure of voice, and ultimately the sclerosis may involve the brain.

The course of this disease is slow, the cases lasting for years: its tendency is, however, to steady progression. It may involve to some extent the other side. As you know, there is a partial decussation of fibres throughout the spinal cord. Although the chief decussation occurs at the pons, there is at different levels of the spinal cord a partial decussation; consequently, when there is extensive lesion of one side, some of these decussating fibres may be affected, and symptoms referred to the other side appear. This man, as you have heard, shows some symptoms of involvement of the right side. The special senses are unaffected.

I shall reserve my remarks on prognosis and treatment until I have finished the discussion of the other two cases.

I shall next speak of insular or disseminated sclerosis. In this variety the patches of sclerosis are scattered throughout the nervous system. Instead of one column being involved uniformly, the spots of hardening are disseminated throughout the cord. These patches of sclerosis may involve the spinal cord alone, hence spinal sclerosis; or they may involve the brain alone, hence cerebral sclerosis; or, as is more usual, they may involve both the cord and the brain, hence cerebro-spinal sclerosis.

The causes and the morbid anatomy are the same as in sclerosis of the lateral columns. The disease begins gradually, one of the first things noticed being usually a tendency to tremor of the muscle and irregular action, but not true ataxia. Sensation is, as a rule, not affected, pain is absent, and the girdle sensation is wanting. The reflexes are exaggerated, and so is electro-muscular contractility. After the disease has lasted for some time, there is a tendency to involvement of the cerebral centres. The mind becomes affected, the memory fails. Sometimes delusions are present. From time to time acute attacks appear which resemble attacks of cerebral congestion, and sometimes simulate apoplectic attacks. There is usually with these high fever. They last a few days and then subside, leaving the patient worse than before, showing that there has been a development of fresh centres of disease. In these cases there is unsteadiness of gait, but the patient is able to walk about as well with his eyes shut as with them open.

Our second patient is 33 years of age; married at the age of nineteen; is the father of five children, four of whom are living and healthy. He denies having had venereal disease. Seven years ago he had a severe fall, striking on a fence. For six years he has had a hot, full feeling in the head. His gait has been growing more unsteady for years. There have been no fulgurant, excentric pains, and no girdle sensation. At first there was numbness in the hands and feet. There is still some numbness in the hands when they are immersed in water. He eats well and sleeps well. The urine is normal. The trouble in the head came first, then the unsteadiness of gait was noticed. Both the arms and legs are affected, but the latter to a more marked extent. At times he has had vertigo, and his sight has been failing for about four years. There was first double vision and then indistinctness. He states that at intervals he seems to take cold, and afterwards the symptoms are worse.

Both the arms and the legs become tremulous on any attempt at sustained motion. This is most marked in the right leg. There is no atrophy. He has not lost weight. The muscles respond normally to the galvanic current, but a little less than normally to the faradic current. There is slight impairment of the cutaneous sensibility.

The pupils are equal, and respond normally to light. The eyes have been examined by Dr. Norris, who reports that there is partial atrophy of the optic nerve on both sides and that there is contraction of the field of vision. There is no hemiopia and no scotoma. The hearing is normal, the intellect seems to be unimpaired, and memory is good.

We observe from a study of this case that in disseminated sclerosis the symptoms are less regular than in pure lateral sclerosis. Sensibility, as in this man, is sometimes affected, showing that little islets of sclerosis exist in the posterior columns. There are also cerebral symptoms, as shown by the condition of vision and by the emotional and irritable mental condition of the patient. From time to time he has the feverish attacks to which I have referred. These he has attributed to catching cold. In some cases the exacerbations are very severe, and are attended with high fever and even with unconsciousness. Each of these attacks leaves the disease more advanced.

In these two cases the sclerosis chiefly affects the antero-lateral or motor columns of the cord. In the second case, however, there is also some involvement of the posterior columns, as shown by the interference with sensation.

Our next patient will illustrate the third form of sclerosis,—that is, sclerosis of the posterior columns, or progressive locomotor ataxia. The causes of this affection are the same as in the other forms of sclerosis, but in these cases I should attach special importance to the influence of exhaustion from venereal excesses.

In this affection there is what is often termed a pre-ataxic stage, in which the symptoms are chiefly those of irritation. There may be attacks of violent headache resembling sick headache. In other instances there are attacks of acute gastric disturbance termed gastric crises. In such cases the patient is seized with violent and inexplicable disturbance of the stomach, with repeated vomiting. This stage is also marked by disturbed sleep and impaired energy.

Then comes the stage of fulgurant excentric pains. The patient begins to complain of pains darting from one part of the body to another. These are unattended with any signs of inflammation in the affected part. They remain a short time, disappear, and return in another location. There may be with these some rheumatic pains which are more persistent. Next, impairment of sensation is noted. There is numbness and tingling in the legs. Often the soles of the feet are affected, and the patient feels as though walking on a soft carpet or on cotton. Examination shows that there is actual impairment of sensation. The sense of pain also may be diminished. The anæsthesia may be irregularly distributed. There may be here and there spots of diminished sensation, while the sensation of the remaining portions of the limb is normal. The patient may also complain of a girdle sensation around the waist.

Then comes the ataxia, or the incoordination of muscular movements. The strength of the limbs may be perfectly retained, and while sitting the patient may be able to kick out his leg with great force, but when he endeavors to co-ordinate his movements, as in walking, uncontrollable contractions of the muscles of the legs are produced, rendering the gait peculiar and unsteady. If the arms are affected, delicate movements with the hands are impossible. This want of co-ordination is not paralysis, for there is no true paralysis in this disease. The trouble lies in the posterior columns of the cord which carry the impression from the nerves up to the brain, which serves as the stimulus causing a motor impulse to be sent out through the anterior columns, producing co-ordinated movement. These posterior columns are diseased and their fibres irregularly wasted, the sensations are transmitted irregularly and imperfectly, and the motor impulses are correspondingly irregular and imperfect. When the patient attempts to walk, which requires the co-ordinated movement of a large number of muscles, there are irregular contractions of the different muscles and the movements of the extremities become uncontrollable. If the condition is marked, walking becomes impossible. The patient soon has to use a cane, and keep his eyes on his feet when walking. Frequently a man who can walk pretty well while watching the ground will instantly fall if he closes the eyes. Often the first thing that attracts the attention of the patient is the inability to walk in the dark.

The sclerosis follows the course of the posterior columns upward. Beginning with the lower extremity, the muscles are involved at higher and higher levels until the arms are affected. Then disorders of vision, such as diplopia and amaurosis, are often noticed. Ataxia of the globes may be present, so that when the patient attempts to turn his eyes in a particular direction the natural co-ordinated movements are not performed, but the globes

are twisted in different directions. The bladder frequently suffers, and there is partial retention or, on the other hand, incontinence of urine. The expulsive power of the rectum becomes more or less impaired, and retention of fæces is at times a troublesome symptom.

The muscles do not waste to any great extent, but their electro-irritability diminishes. The reflex irritability diminishes decidedly, so that the knee-jerk may disappear. From time to time acute symptoms appear, which, subsiding, leave the condition worse, marking an extension of the disease.

The third patient is F. M., age 54 years, and a carpenter by occupation. His family history is good. He has been a hard-working man. There has been no venereal disease and no sexual excess. For the past five years he has had stabbing pains in the backs of the legs. He has also had the sensation of a cord bound around the waist. He has noticed considerable difficulty in walking in the dark, especially over a rough road. His sight is failing, and sexual desire is lessening. Memory is also failing. The pupils do not respond promptly to light. The sensation seems to be pretty well preserved. Examination shows that the knee-jerk is entirely absent on both sides. Testing the man's ability to stand and walk with his eyes shut, we find that he is able to do this fairly well.

He is evidently in an early stage of this affection, which is excessively slow in its progress. I have seen it run its course in three years, and I have patients under my care who have been ataxic for twenty years or longer.

This loss of reflex irritability is a very important symptom. At the same time, I am not willing to accept the statement of certain authors as to the positive value of loss of the patellar reflex as a proof of established posterior sclerosis. I have seen absent knee-jerk in several conditions of functional spinal disorder, which recovered perfectly and in which there was return of the normal knee-jerk. I have found it in cases of alcoholic paresis and in tobacco paresis. I have seen it in some cases of congestion where organic disease had not been fully established. While I regard the loss of the knee-jerk as a very important sign, and while I regard it as of high diagnostic value when conjoined with stabbing pains, the girdle sensation, failing sight, and difficulty in walking in the dark, yet I hold that the diagnosis of established posterior sclerosis cannot be made from this symptom alone. An active business-man came to me in a state of great alarm, having been told that he had locomotor ataxia. There was nothing to indicate this except a total loss of the patellar reflex. A winter in Florida brought it back.

[The patients were removed.]

We have had, then, illustrations of the three forms of spinal sclerosis. It yet remains for me to speak of the prognosis and treatment. The prognosis in all these forms of disease is exceedingly unfavorable. Their course, though slow, is nearly always progressive. They may extend over a period of from two to twenty or more years. In some cases, however, the disease is arrested. This is true of posterior and lateral sclerosis at least. Of course, in a fully-developed case we rarely can do more than palliate the symptoms.

Where there is marked atrophy and degeneration of the muscles, there is reason to believe that the disease has extended to the gray substance of the cord. In these cases the prognosis is even more unfavorable and the course more rapid than in the other varieties of sclerosis of the spinal cord.

In the treatment of these affections, rest is of importance. The nervous system is weak and irritable, and rest is essential. In fact, rest in bed, when it can be secured, often exerts a powerful influence in checking the progress of the case. I like to confine patients to bed for from sixty to ninety days. This has often mitigated the symptoms to a remarkable degree. When absolute rest is not available, there should be avoidance of exertion, excitement, and fatigue. In these cases too much must not be insisted on. The treatment must be based on a study of the moral as well as the physical condition of the patient, and must be pursued with tact and discretion. Careful avoidance of exposure to damp and cold must be insisted upon. The diet and dress should also receive attention.

If there be a history of syphilis, although you may not feel convinced that the disease has resulted from this taint, yet you will give the patient the benefit of the doubt, and will use antisyphilitic treatment vigorously until you have determined its capacity for good. The iodide of po-

tassium in large doses will usually be found of more service than mercurial preparations. By large doses I mean from ten to thirty grains four times a day. This should not be pursued in a routine manner; but, if there is no evidence of benefit, it should be stopped.

Other alteratives are at times useful. Nitrate of silver has seemed to me to exert a positive influence over the fulgurant pains. I use it in the early stage of posterior sclerosis, where these pains are present. I give it in full doses in quite long courses, alternating it with iodide of potassium in non-syphilitic cases. In syphilitic cases I push the iodide continuously, even if I give the nitrate of silver at the same time. Chloride of gold and silver, which possess some alterative power, has been highly recommended by some authors, but in my judgment it is of much less value than nitrate of silver.

Various alkaline preparations have been used with the idea of inducing absorption at the seat of disease; but I know of no clinical evidences to support this method of treatment. The remedies which I have mentioned I believe to be the most useful.

Special attention must be paid to the secretions, and the condition of the bladder and bowels must be watched.

Counter-irritation I think is useful. I prefer the use of the actual cautery. In the first case, where I think there may be involvement of a nerve-trunk, I have applied it over the sciatic nerve and over the cord. In the second case I have applied it at the base of the brain and over the cervical region. I should select one or other of these points according to the type of disease.

In cases where there is a persistent tendency to contraction I intend to try nerve-stretching, and also where there are marked fulgurant pains in the region of one nerve. I am induced to try this on account of the remarkable influence which stretching of the nerve exercises over symptoms throughout the area of that nerve, and by the fact that irritation extending from a peripheral nerve in so many cases serves to excite the trouble. These facts would justify the experiment,—which is, however, only an experiment.

Manipulation, friction, and electricity, particularly in the form of faradization with a slowly-interrupted, moderate current, are to be recommended.

There are several mechanical devices by which ataxic patients may be enabled to go about. Crutches of peculiar construction, in which the leg is secured to the crutch with bands, often enable the patients to take exercise when otherwise they could not.

ORIGINAL COMMUNICATIONS.

REVIEW OF MEDICAL AND SURGICAL ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,
Neurologist, Presbyterian Hospital.

PRODUCTION OF OZONE BY STATIC MACHINES.

DR. ANDREW H. SMITH, of New York, has devised an ingenious method of utilizing static electricity for the production of ozone as a therapeutic agent, more particularly for inhalation. He constructed a glass cylinder ten inches long by five wide, and introduced a brass rod into each end through a suitable aperture. The rod fitted loosely, so as to permit air to enter, and the inside ends were armed with spherical balls, as found on the ordinary dischargers of the static machine. On one side of the cylinder a short tube was fixed, and the cavity was then loosely packed with fine absorbent cotton. Upon the passage of a strong current from the machine, a volume of ozone is liberated, which is then inhaled directly from the tube or conveyed to any point desired by flexible tubing. Caution is necessary, as ozone is at times very irritating to inflamed or congested mucous membrane both of the throat and eye, as we know from personal experience. Under favorable conditions, this method of generating ozone is preferable to the use of phosphorus for that purpose, and it is free from the danger which attaches to that substance unless confined to the manipulations of the physician.

Mr. Alfred C. Walker, of Chester, England, has recently utilized static electricity in settling dust and fumes developed in the production of lead and zinc salts, which are extremely poisonous to the workmen employed. Connections are made from points whence such fumes arise to a main ventilating, horizontal shaft, preferably of considerable length, through which a current of air is kept flowing. Midway in its length a strong discharge

of static electricity is directed across the duct from a number of blunt rods, and precipitation of all minute solid particles ensues, the deposition being greater near the electrodes, but continuing for some distance beyond, toward the outlet of the shaft. A Wimshurst machine with plates of five feet in diameter was used. The principle is not new; it has long been used as a pleasing experiment with the Leyden jar; but as a hygienic measure in chemical laboratories it is an advance, and the application of something in this direction in the ventilation of pest-wards in hospitals, particularly in quarantine stations, may be desirable.

Vigoroux, as we have before reported, lays stress upon the value of ozone in the atmosphere of cholera-wards produced by static machines; and, whether his ideas are correct or not, it is certainly true, as we have demonstrated by experiment (reported elsewhere*), that microgerms can be sterilized or destroyed by electricity: hence the application of this method to the exhaust ventilating ducts of smallpox or yellow-fever wards is well worth experimenting upon, particularly because it involves little expense.

AN IMPROVED STATIC-ELECTRIC MACHINE.

Messrs. Waite & Bartlett have constructed, at the suggestion of Dr. Ambrose L. Ranney, of New York, a very handsome piece of mechanism, which is an obvious advance on hitherto-existing apparatus. We give the principal features, as stated by Dr. Ranney:

1. The case is so constructed that all of its joints are packed with soft rubber before its screws are tightened. This prevents the entrance of moisture from without, and makes the machine a useful one at all seasons of the year.

Soft rubber now constitutes the best packing for steam-apparatus, and is also used in hermetically sealing fruit-jars in preference to any other known material. All imperfections in the joints of the case are perfectly sealed in this instrument.

The *doors of the case* are so arranged as to be drawn tightly in contact with a frame covered with soft rubber by means of milled screws.

The glass in the case is put into the frames with putty, which is impervious to air.

The poles of the machine perforate the wooden portion of the case instead of the glass windows. They are insulated with hard rubber, and the apertures are protected by soft-rubber packing placed between hard-rubber buttons and the wood. Thus the danger of breakage of the case by accident is decreased without impairing its impermeability to dampness or allowing of leakage of the electricity generated when the machine is in use, while the strength of the case is materially increased by this modification.

2. The axle is so built as to reduce the friction to a minimum and to allow of its being oiled without opening the case.

3. The driving-wheel is very large, and rests upon a cast-iron support. This insures both ease of motion and durability.

4. The glass plates of the machine are nine in number. Six of these revolve and three are stationary. The stationary plates are of peculiar shape. The revolving wheels are made of carefully-selected glass, so as to be as true as possible and bear evenly upon the rubbers as they revolve.

5. The excitants consist of cat-skin rubbers between the inner plates and metal buttons upon the outer plates, which touch as they revolve upon fixed metal brushes.

6. The collectors have tinsel attachments which aid in gathering the electricity generated.

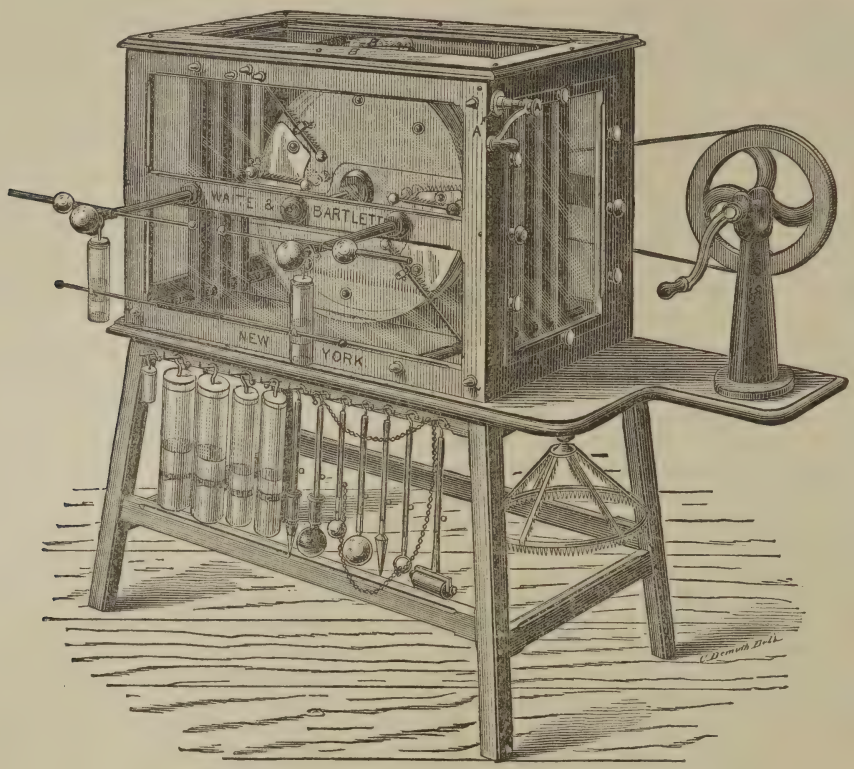
7. The electrodes are made with handles composed of hard rubber instead of glass. They are therefore less liable to be broken, and are as perfectly insulated.

8. Each machine is provided with three pairs of Leyden jars of different sizes. It is arranged also with hooks upon which the electrodes may be hung when not in use.

Sparks eleven inches in length have been obtained during a warm, muggy day in August, which speaks well for efficiency in the new machine.

Mr. D. Rosseau, of 310 Mott Avenue, New York, writes, "I notice in the *New York Medical Record* of the 17th instant the description, by Ambrose L. Ranney, M.D., of a so-called new apparatus for generating static electricity. I am very much surprised at the similarity to the Induction Holtz Machine, manufactured by me for nearly two years. With the exception of the rubber, the principle of the machine was discovered by Holtz, but the new construction, as described by Dr. Ranney,

* Medical Bulletin, December, 1883.



was devised by me, with the help of Charles Van Brunt and H. D. Hall. The first one I sold for medical use was to Dr. M. A. Pallen, in September, 1884; and one to A. C. Hutchinson, President of Morgan's Louisiana and Texas Railroad, also in the fall of 1884; and one to Dr. T. Hamilton Burck, December 18, 1884."

THERMO-ELECTRIC PROSTATOTOMY.

Prof. Bottini, of Pavia, was consulted by a man, æt. 68 years, who was suffering from enlarged prostate. The catheter had to be employed, because of the large amount of muco-pus held in the urine. Irrigations of sulpho-carbolate of zinc and boracic acid toned up the bladder and cleared the urine somewhat. A thermo-electric cautery, consisting of a double-channelled catheter (the inner tube of which holds the conducting wires and the outer permitting a stream of cold water to control the heat in the urethral portion), was used. The platinum plate at the extremity of the loop was applied to the hypertrophied gland for forty-five seconds, and a catheter was then retained in the bladder. Suppositories of belladonna controlled the vesical tenesmus. Sloughs came away in twenty-four days, and micturition was then possible without the catheter. The local use of faradic currents was of benefit, during the course of the case, in toning the parts, and nux vomica was given internally. The procedure is said by Dr. Bottini to be free from much pain, but in sensitive persons chloroform may be used. It is, however, evident that care is demanded, not only against cystitis, but to avoid injury to the vesico-rectal wall, instances of fistula having been produced to our knowledge in operations on the bladder in the hands of competent electro-therapeutists. So long as other reliable methods of treating senile enlargement of the gland exist, it would be well carefully to select such cases as are subjected to electro-cautery.

ELECTRICITY IN GYNÆCOLOGY AND OBSTETRICS.

Hofmeier, of the Royal Berlin University, dwells at length on the value of electro-therapeutics in uterine affections, both

as to the gravid and puerperal states. He is supported by Brumm, of Scanzoni's clinic (who uses faradism), and Baier, of Freund's clinic in Strassburg (who depends upon galvanism). The indifferent results obtained by each of these observers when both electrodes were placed externally are believed by them to be dependent upon the differential value of the two currents; but, if the method used by the reviewer, of *direct intra-uterine* or conjoined applications, had been practised, it would have demonstrated the fact that both currents are equally valuable, although not indifferently applicable to every case. For example, faradism is useful in producing uterine contraction, whatever its condition; but galvanism will act more decidedly in reducing the organ to its normal size if hypertrophied, as in subinvolution. Great dependence is placed upon electricity by each author in dysmenorrhœa and other painful affections of the non-gravid organ.

Vulliet, in the Geneva *Archiv für Gynaecologie*, Band xxii. Heft 3, relates the case of a woman who, having suffered from previous pelvic inflammation, evidenced symptoms of pregnancy, with discharge of decidual membrane. A tumor formed behind the uterus, pushing it forward, and this was incised per vaginam, with no good result. Laparotomy was then done, but the patient died in seventy-two hours from septic peritonitis. Death was undoubtedly due to ill-managed surgical interference. The case was one of extra-uterine pregnancy, and it is referred to as being a typical one for the use of electricity in arresting the development of the ovum,—being almost precisely similar to one under the writer's charge last spring, which terminated favorably, in which faradism produced arrest, and galvanism, later, the absorption of the foreign body. So far we have carefully studied the use of electricity in fifteen cases of extra-uterine pregnancy, four of which were under our own notice, and there is certainly nothing in medicine more fully established than the value and harmlessness of electricity in just such cases as the one above quoted.

INDUCTION OF PREMATURE LABOR BY ELECTRICITY.

Dr. Syromatnikor, in *Vratch*, mentions three methods for inducing labor,—one in which both rheophores are placed externally, one in which an external and an internal pole are used, and the third in which both are used per vaginam. He relates a late case of contracted pelvis, requiring perforation of the head in a previous delivery, and here he employed faradism at the thirty-seventh (?) week through a Sparner's coil (primary). Although pains were produced in an hour, he seems to have required an entire week before completing the work, which implies imperfection, because labor can be readily completed in from twelve to twenty-four hours. The writer mentioned two other cases by Gruenewalt, and one by Typaykoff, all of which were successful.

ELECTRICITY IN INTESTINAL OBSTRUCTION.

Dr. I. J. Hudson relates in the *Medical Times and Gazette* a series of cases occurring in operatives in lead-works and in potteries using lead in glazing their wares. Some of the cases are classed as intussusceptions, but it is probable that all were dependent upon lead-paralysis of the intestinal muscular coat. Dr. Hudson now relies upon galvanism altogether in the treatment of his patients, and the duration of their illness was notably lessened in comparison with the time occupied under other plans of cure. In the potteries the poison is absorbed by the skin, but in the lead-works the process alluded to under the head of "static electricity" would probably have saved much, if not all, of this suffering.

GALVANISM IN ASIATIC CHOLERA.

Professor Peter, in a speech at the Paris Academy of Medicine a few days ago, referred to the theory that cholera was a nervous disease, and quoted the opinion of Chapman, of London, to that effect (as taught by M. Jules Guérin fifty years ago). By quieting the spasm of the blood-vessels and reducing spinal congestion, the animal heat is revived and the muscular cramp arrested. By its influence the current modifies the innervation of the great splanchnic nerves, as does the ice-bag: hence the epigastric symptoms are relieved and the prominent vomiting is controlled, as happens under galvanism in non-choleraic cases. It is probable that galvanism may supplant the ice-bag in the hands of experts, but further trial is of course necessary to establish its actual value.

ELECTRICITY IN DILATATION OF THE STOMACH.

In the *Rivista Clinica e Terapeutica*, Dr. Predazzi reports two cases of atonic dilatation of the stomach successfully treated by faradism applied for *two minutes* daily, improvement being noted in ten or twelve days. In a paper on "The Treatment of Abdominal Disorders by Electricity,"* published some time ago, the results in thirty cases were noted, and we cannot at all endorse the method here quoted. From ten to twenty minutes daily under galvanism were requisite for at least six months in our practice, and faradic currents were ill borne in every instance, the abdominal muscular contractions being too painful, yet inseparable from faradism.

ELECTRICITY IN SKIN-DISEASE.

Dr. Hardaway has remarked the wide usefulness of electrolysis in cosmetic manipulations. In hirsuties, in warts and moles, in milia, in many small fibromata, and in cutaneous horns he finds galvanism of value. He reports decided success in pigmentary defects such as very dark freckles, his method being to prick the surface at many points with a fine needle, care being taken not to go down through the corium, so as to avoid scarring. In the disfiguring port-wine marks one plan is to place over the surface a thin plate of zinc perforated with numerous holes, through which the needle is inserted, and the perforations are thus prevented from overlapping each other. Reference may be made for fuller account to the *Journal of Cutaneous and Venereal Diseases*, No. 4, vol. iii.

GALVANISM IN DIPHTHERITIC PARALYSIS.

This form of paralysis undoubtedly tends to recover spontaneously; but, in order to contrast the value of tonics, massage, and electricity, Dr. James K. Thatcher, of Yale College, submitted a severe case to experiment, in which paralysis of both arms and legs was present. Under tonic treatment, the progress towards recovery was noted in the general condition, but the arms were reserved for experiment. The strength measured by a grip dynamometer was, on beginning, right 31, left 29. Five periods of seven to ten days each were compared with each other, and the gains with faradism and massage were:

	Arm treated.	Arm untreated.
Massage	8.3	11.4
Faradism	4.3	4.1

Here massage appears to have done more harm than good, and faradism was of little use; yet one case will not do to base definite conclusions on. Less difficulty is met in the results from galvanism, which were as annexed:

	Galvanized Arm.	Untreated Arm.
1. Ten days to left arm .	17	12
2. Seven days to right arm	15	10
3. Seven days to left arm .	7.4	0.9

The galvanized arm made progress in the rate of 1.72 to 1 in the other,—nearly twice as much. The dynamometer strength now was—right 74.6, left 75.8. In our own practice we rely on central and general galvanization, without tonics or massage, and the progress is fully as rapid as that of Dr. Thatcher, with less trouble to the patient.

SEVERE ELECTRIC SHOCK.

Dr. Liman called attention to the results of lightning-stroke at a recent meeting of the Berlin Verein für Innere Medicin. Various ecchymoses and excoriations, supposed to be photographs of trees, clouds, etc., are shown to be due to protection of the surface by heavy or light layers of clothing offering resistance, and death is generally attributable to asphyxia. Rupture of internal organs is common. Prof. Leyden confirmed the opinions of Dr. Liman.

Dr. W. G. Eccleston refers to the fact that text-books say little or nothing about the treatment of shock from lightning or contact with dynamo-electric machines. He notes in the *Medical Record* three cases with extreme cardiac and respiratory depression, and he has found the hypodermic use of atropia in doses of $\frac{1}{100}$ to $\frac{1}{80}$ of a grain the best way to combat the symptoms. In these days, when one is liable at any moment to fall in with cases of severe shock from electric-lighting plants, the results of Dr. Eccleston's labor are of much value.

ELECTRODE COVERINGS.

Dr. Massey proposes the use of absorbent cotton as a substitute for the sponge

* Medical Bulletin, October, November, and December, 1884.

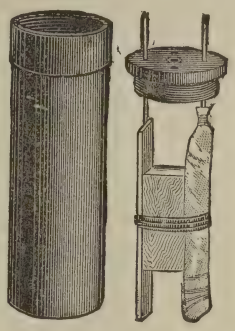
covers ordinarily employed for rheophore disks or points. The cotton is easily applied; it holds enough moisture to conduct properly; it is clean, and cannot convey any disease from one patient to another, which is a point not usually thought of by general practitioners. We have always used fresh covers of muslin for each case, held on by small rubber bands, all of which can be relegated to the waste-basket when done with. But the idea of Dr. Massey is at once simple and efficient after the knack of twisting the cotton on is acquired, at least in the smaller rheophores. In large disks, sponges will, we think, still be the better; and they must, of course, be thoroughly cleansed by boiling water and carbolic or sublimate soap after each application.

IMPROVED ELECTRICAL APPARATUS.

The ordinary portable batteries have heretofore been inconvenient and unreliable, particularly those using carbon plates and electropoion fluid, from the tendency of the carbons to break easily and of the acid to fail unless frequently replenished. In addition to this, the plates in such instruments must be lifted out of the solution when not in use: hence it is difficult to keep the cells acid-tight by the best form of hydrostat, single fluid elements are generally too weak, and gravity-cells do not suit for any except permanent apparatus. A new instrument is now made with elements of zinc and silver chloride immersed in zinc-sulphate solution.

The cells which hold the fluid and enclose the elements are of hard rubber, three inches long and one inch in diameter. A plate of hard rubber has upon its upper surface rows of protecting studs corresponding to the number of cells of the battery. To the under side of this plate are permanently attached plugs or stoppers of hard rubber, which form the caps of the battery-cells. These plugs and the mouths of the bottles are provided with corresponding threads, so that each bottle may be readily screwed to its cap or removed from it without interfering with the others.

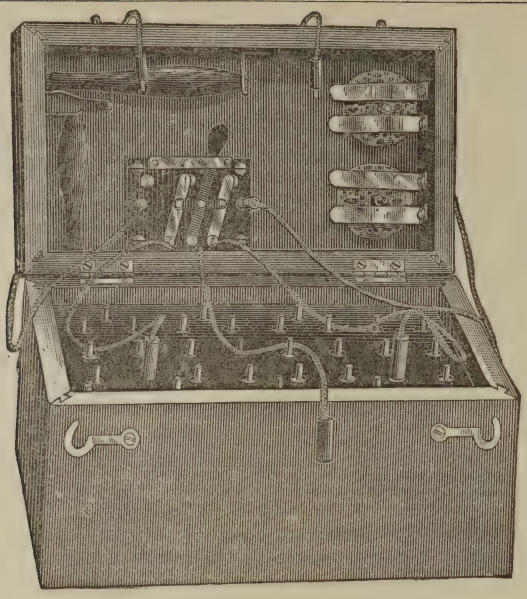
The connections are entirely free from corrosion. The silver wires, which are attached directly to the zinc and silver plates in the cells, are passed up through the caps and plate, and fastened down under nuts which screw upon the connecting studs. There are no connections underneath the plates. The nuts and ends



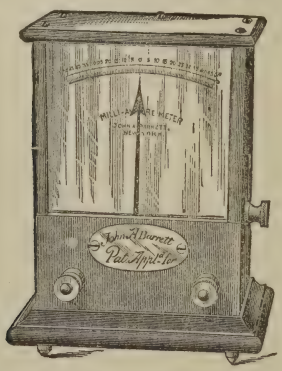
of the silver wires are on the top of the plate, easy of access, and entirely removed from moisture or the fluid of the cells.

The metallic elements of the battery are connected in order to the studs which form the terminals of the successive cells by silver wires, which pass up through perforations in the caps and plate, and are screwed down in pairs under nuts turning upon the studs. A perforated top plate of polished rubber, through which the tips of the studs project, is laid over the whole. On this plate are stamped the number of the studs in the order in which the connections of the battery are made. The current-reverser is located in the cover of the box. The wrapping around the chloride-bar retains the metallic silver formed by breaking up the salt when the circuit is closed, and this can be sold or exchanged for new plates: hence there is no waste. The zincs, it is stated, last indefinitely. The whole is compact, and, with the addition of a rheostat in the cover of the box, will be an excellent apparatus. The force is about that of the Daniell,—one and a tenth volt per cell. The internal resistance is said to be only about four ohms in thirty cells, which is very little, if true. The connections are simple; but we prefer screw binding-posts to split clamps, which are apt to lose their spring power. The cuts show the internal construction and general aspect of the battery complete.

Mr. Barrett, of New York, the maker of the battery described, has also got up a milliampèremeter for absolute measurement of constant units of electro-motive force. We have repeatedly urged this point upon our readers, for the hap-hazard method of dosage with electricity is at the bottom of



nearly all failures in using it. The usual galvanoscope simply shows the battery to be working, and tangent or sine galvanometers are cumbersome and costly,—too much so for the medical electrician. The new instrument is quite accurate: it is sensitive, yet steady, and gives units always the same for an equal force of current. As the correct way is always to employ so many volts or milliampères, instead of such a number of cells, which may or may not be uniform in strength day after day, the utility of the meter is apparent.



The instrument is the outgrowth of the effort of Dr. De Watteville, of London, to establish a unit of measurement by electricians at the Congress of 1878. The meter may be used simply as a test of current-strength before applying electricity to a patient; but the better plan is to intercalate it in the circuit during the sitting, together with a rheostat. Its internal resistance is about fifty ohms, which must be compensated for by added cells, which bring the needle to the index desired during the treatment.

STATISTICS RELATING TO SEVEN HUNDRED BIRTHS (WHITE) OCCURRING IN THE PHILADELPHIA HOSPITAL (BLOCKLEY) BETWEEN 1865 AND 1872.

BY JOHN STOCKTON-HOUGH, M.D.

THESE tables were constructed some years ago, with a view of obtaining certain facts which have from time to time been incorporated in other papers published by the author, and are now offered to the profession in their entirety for the first time.

These are the only tables I know of in which the length of the trunk of the fœtus is compared with the entire length, and from an examination of which I discovered that female children have the trunk longer in proportion to their entire length than do males,—as may be seen from an examination of the table devoted to this fact. The weight of the placenta is not given; but I have shown in another paper*

* "Influence of the Sex of the Fœtus on the Condition of the Mother during Gestation, Lactation, etc." *Amer. Jour. of Obstet.*, February, March, May, June, 1884. Reprinted, 8vo, pp. 70, New York, 1884.

that observations founded on sixteen thousand cases show the placenta to be heavier in proportion to the fœtal mass in the case of females than with males,—an explanation of which may be found in the paper referred to. The duration of gestation is shown to be longer by three days with males than with females. The duration of labor was from two to four hours greater with males than with females.

Number of Cases observed.	Average Age of Mother.	Single or Married.	Number of Pregnancy.	Duration of Gestation.	Duration of Labor (all the stages).		Sex of Child.	Length of Child.		Weight of Child (Avoirdupois).	
								Entire.	Trunk.		
				Months.	Hrs.	Min.		Inches.	Inches.	Lb.	Oz.
50	20.28	Single.	First.	8.66	17	8	Female.	18.40	12.15	6	5.7
39	20.92	Single.	First.	8.95	15	41	Female.	19.15	12.30	6	13.0
40	21.02	Single.	First.	8.99	18	37	Female.	19.33	12.94	7	3.3
39	21.46	Single.	First.	8.88	19	19	Female.	18.92	12.33	6	15.0
168	20.92	Single.	First.	8.87	17	41	Female.	18.95	12.43	6	13.25
34	20.20	Single.	First.	8.90	18	58	Male.	19.20	12.49	7	2.5
34	21.40	Single.	First.	9.00	20	26	Male.	19.30	12.50	7	9.0
25	22.20	Single.	First.	8.93	21	30	Male.	19.10	12.30	7	7.0
33	22.40	Single.	First.	8.85	18	35	Male.	19.50	13.00	7	15.0
27	23.30	Single.	First.	8.88	22	17	Male.	20.00	12.60	7	3.0
153	21.90	Single.	First.	8.95	20	21	Male.	19.42	12.59	7	7.3
48	22.88	Married.	First.	8.81	16	26	Female.	18.56	12.27	6	7.3
54	23.35	Married.	First.	8.92	20	36	Male.	19.15	12.50	6	14.8
51	26.26	Single.	Second.	8.85	16	16	Female.	19.30	12.54	7	9.0
17	23.70	Single.	Second.	9.03	11	3	Male.	19.60	12.70	7	12.0
44	26.06	Married.	Second.	8.97	11	18	Female.	19.26	12.66	7	7.0
44	23.38	Married.	Second.	8.98	13	30	Male.	19.66	12.95	7	12.05
3	27.30	Single.	Third.	9.00	10	50	Female.	18.70	12.73	7	2.7
7	25.14	Single.	Third.	8.99	14	30	Male.	19.28	12.42	7	2.2
21	28.70	Married.	Third.	9.00	13	23	Female.	19.45	12.80	7	14.6
15	29.30	Married.	Third.	9.00	14	12	Male.	20.30	13.50	8	6.0
4	32.00	Single.	Fourth.	9.00	12	11	Female.	18.50	12.50	7	9.5
1	33.00	Single.	Fourth.	9.00	5	00	Male.	20.00	14.00	8	2.0
14	30.00	Married.	Fourth.	8.61	11	29	Female.	19.46	12.76	7	3.0
10	31.00	Married.	Fourth.	9.00	10	51	Male.	19.50	13.00	8	0.8
1	26.00	Single.	Fifth.	9.00	18	00	Female.	20.00	14.00	8	8.0
10	32.70	Married.	Fifth.	9.00	11	04	Female.	19.40	13.30	7	13.0
11	30.27	Married.	Fifth.	9.00	10	23	Male.	19.30	12.81	7	15.0
1	38.00	Single.	Sixth.	8.00	8	15	Female.	15.00	10.00	3	9.0
7	32.28	Married.	Sixth.	9.06	13	15	Female.	19.28	12.85	7	11.0
8	30.25	Married.	Sixth.	9.00	10	12	Male.	19.12	12.75	7	8.0
6	34.16	Married.	Seventh.	9.13	16	10	Female.	19.00	12.00	6	15.6
6	34.30	Married.	Seventh.	9.00	11	15	Male.	19.16	13.00	7	5.0
1	33.00	Married.	Eighth.	9.00	5	30	Female.	20.00	14.00	9	6.0
2	32.50	Married.	Eighth.	9.00	5	42	Male.	19.50	12.50	8	10.0
1	33.00	Married.	Ninth.	9.00		30	Female.	19.00	14.00	7	1.0
1	37.00	Married.	Ninth.	9.00	3	30	Male.	19.00	13.00	7	7.0
2	37.00	Married.	Tenth.	9.00	19	20	Female.	19.00	12.00	7	11.0
1	33.00	Married.	Tenth.	9.00	17	10	Male.	18.00	12.00	6	4.0

RECAPITULATION.

				Months.	Hrs.	Min.		Inches.	Inches.	Lb.	Oz.
168	20.92	Single.	First.	8.87	17	41	Female.	18.95	12.43	6	13.25
153	21.90	Single.	First.	8.95	20	21	Male.	19.42	12.59	7	7.30
48	22.88	Married.	First.	8.81	16	26	Female.	18.56	12.27	6	7.30
54	23.35	Married.	First.	8.92	20	36	Male.	19.15	12.50	6	14.80
51	26.26	Single.	Second.	8.85	16	16	Female.	19.30	12.54	7	9.00
17	23.70	Single.	Second.	9.03	11	03	Male.	19.60	12.70	7	12.00
44	26.06	Married.	Second.	8.97	11	18	Female.	19.26	12.66	7	7.00
44	23.38	Married.	Second.	8.98	13	30	Male.	19.26	12.95	7	12.5
579											

311 cases with girls, av. duration of gestation, 8.87 months.
268 " " boys, " " " 8.97 "

Longer duration with boys, by .10 "
Or, 3 days.

The male children were, on an average, 6½ ounces heavier than the female.

Table showing the Effect of Age and Number of Pregnancy of the Woman on the Length and Weight of her Offspring, Legitimate and Illegitimate combined.

Number of Pregnancy.	Average Age of Woman.	Length in Inches.						Weight (Avoirdupois).	
		Males.			Females.				
		Number of Cases.	Entire.	Body.	Number of Cases.	Entire.	Trunk.	Males.	Females.
								Lb. Oz.	Lb. Oz.
First.	21.35	.....	.....	.....	216	18.82	12.39	.....	6 10.46
First.	22.27	207	19.35	12.56	.....	.....	.....	7 5.82	.....
Second.	26.16	.....	.....	.....	95	19.28	12.60	.....	7 8.07
Second.	23.48	61	19.64	12.87	...	.....	.....	7 12.00	.....
Third.	28.52	...	.....	.....	24	19.35	12.79	.....	7 13.11
Third.	27.97	22	19.97	13.15	...	.....	.....	8 6.00	.....
Fourth.	30.44	...	.....	.....	18	19 24	12.70	.....	7 4.44
Fourth.	31.18	11	19.59	13.09	...	.....	.....	8 0.91	.....

Table showing the Numerical Relation between the Entire Length and the Length of Trunk (Level of Vertex to Level of Perineum) of the New-Born Child; also illustrating the Fact of Greater Proportional Length of Trunk of Female Children over Male, as first brought out by the Author.

Average Age of Mother.	Number of Cases observed.	Mother Single or Married.	Number of Pregnancy.	Sex of Child.	Actual Length in Inches.		Proportion.	Weight.
					Entire.	Trunk.		Lb. Oz.
20.92	168	Single.	First.	Female.	18.95	12.43	100 : 65.59	6 13
21.90	153	Single.	First.	Male.	19.42	12.59	100 : 64.83	7 7
					.47	.16	+.76	—10
22.88	48	Married.	First.	Female.	18.56	12.27	100 : 66.11	6 7
23.35	54	Married.	First.	Male.	19.15	12.50	100 : 65.27	6 14
					.59	.23	+.84	—7
26.26	51	Single.	Second.	Female.	19.30	12.54	100 : 65.07	7 9
23.70	17	Single.	Second.	Male.	19.60	12.66	100 : 64.59	7 12
					.30	.12	+.48	—3
26.06	44	Married.	Second.	Female.	19.26	12.66	100 : 65.79	7 7
23.38	44	Married.	Second.	Male.	19.66	12.95	100 : 65.87	7 12
	579				.40	.29	—.08	—5

An examination of the following table shows that the duration of labor (all stages combined) is greater with male children than with female.

Table showing the Duration of Labor (all Stages combined).

PRIMIPARÆ.

Males.	Hours.	Weight. Pounds.	Ounces.	
153	20.21′	7	7.3	Single women.
54	20.36′	6	14.8	Married "
Females.	Hours.	Weight. Pounds.	Ounces.	
168	17.41′	6	13.2	Single women.
48	16.26′	6	7.3	Married "

MULTIPARÆ, SECOND LABOR.

Males.	Hours.	Weight. Pounds.	Ounces.	
17	11.03′	7	12	Single women.
44	13.30′	7	12.5	Married "
Females.	Hours.	Weight. Pounds.	Ounces.	
51	16.16′	7	9	Single women.
44	11.18′	7	7	Married "

The proportion of sexes was as follows:

Illegitimate: 170 boys to 211 girls, or 80.5 boys to 100 girls.
Legitimate: 98 boys to 92 girls, or 106.5 boys to 100 girls.

EPILEPSY DEVELOPED DURING TYPHOID FEVER.

BY CHARLES BAUM, M.D.

MARY F., æt. 14 years and 6 months, an inmate of the Soldiers' Orphans' Institute of this city, was visited for the first time January 9, 1885. She was of medium height, slender figure, and nervous temperament. Menstruation had begun five months previously, and had been properly performed. After several days of increasing languor she went to bed, where she now had been four days, with weakness of limbs, headache, drowsiness, slight fever, loss of appetite, yellow-furred tremulous tongue, repeated epistaxis, pulse 112 per minute and weak, and diarrhœa for two days, the stools having the usual ochre color. The day following, numerous rose-colored spots, disappearing upon and returning after pressure, appeared on the skin over the abdomen and the thorax. There was moderate tympany and evenly-diffused pain in the abdomen on pressure. Three days later active delirium occurred. During convalescence constipation was present, but was easily relieved.

From the onset of the attack the treatment consisted in liquid diet and the administration of dilute muriatic acid. During the second week oil of turpentine aided in cleansing the dry, brown tongue, decreasing the diarrhœa, and relieving the delirium.

Nothing of unusual note marked the progress of the fever until February 6 (four weeks from the date of the first visit). Just when she had fairly entered the stage of convalescence, and before any change of diet had been made, sudden emesis occurred, and four hours later a fully-marked epileptic fit. Spasm after spasm followed with such rapidity that at no time for the space of three hours did the muscular system become quiet. At this juncture I saw her and immediately administered ether by inhalation, which speedily arrested the convulsions. Each paroxysm was marked by double internal strabismus, widely-dilated pupils, grinding of the teeth, frothy blood-tinged saliva, fingers firmly clinched over the thumbs, and tonic, followed by clonic, muscular contractions. After the inhalation of two fluidounces of ether she fell into a heavy sleep of eight hours' duration, from which she awoke in a state of confusion. The urine was examined and found negative as regards albumen, but it contained a large excess of phosphates.

Upon the date of the fit menstruation should have occurred, but was not resumed until her usual health was regained. One week later a second convulsion occurred, being announced by a sharp cry. The entire paroxysm lasted about five minutes, and was followed by a deep sleep. Bromide of potassium with fluid extract of valerian was ordered for the epilepsy. During the following three weeks numerous (about twelve) superficial abscesses were incised.

Careful inquiry into the history of the patient did not reveal any suspicion of previous night- or day-epilepsy. Her father is said to be a peculiar man, and on two occasions, without any known reason, has abandoned his family and was not able to give a clear account of his wanderings. Her mother was delicate, and died of typhoid fever.

On two occasions, during the seven months since the first convulsion, while excited, she has had a pronounced seizure, —the so-called *petit mal.* She has been carefully watched, but as yet no attack seems to have occurred during the night.

630 NORTH BROAD STREET, PHILADELPHIA, PA.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF ARTHUR V. MEIGS, M.D.,

One of the Attending Physicians to the Hospital.

Reported by CHARLES BAUM, M.D.

VALVULAR DISEASE OF THE HEART, WITH PULMONARY APOPLEXY AND TYPHOID FEVER.

GENTLEMEN,—Before showing the interesting pathological specimens before me, I will read the history of the case:

Charles S., æt. 24, single, German, a baker, has been in this country two and a half years. His mother and sister died of phthisis. When 15 years old he had two attacks of articular rheumatism, and he has suffered from dyspnœa and palpitation of the heart for five or six years. One year ago he was admitted into this ward, suffering with acute inflammatory rheumatism and accompanying pericarditis. Endocardial inflammation was also present, there being a positive systolic murmur at the

apex, as well as a double murmur at the aortic cartilage, indicating mitral regurgitation with aortic obstruction and regurgitation. After leaving the ward he resumed baking, and in the winter spent three months grappling for oysters: since then he worked daily at his trade until two days prior to his admission to the hospital, on September 7. For the past three months he has had cough, muco-purulent expectoration, and night-sweats. Gradually he found himself becoming more weak, and for two weeks he coughed up bright blood, which has recurred daily since. He had been in bed only two days. Upon admission a thorough physical examination was not permissible, owing to his condition. The condition of the pulse known as Corrigan's or water-hammer was very marked; and, although the heart was acting tumultuously and irregularly, a loud systolic murmur was audible at the inferior angle of the left scapula. A few days later physical examination revealed pulmonary emphysema and apoplexy, and also general hypertrophy of the heart, especially of the left ventricle, as well as mitral regurgitation and double aortic disease. Five days after his admission ochre-colored diarrhœa began, followed by epistaxis, stupor, dull hearing, dry brown tongue; and several days later rose-colored spots upon the abdomen, which was very tympanitic from the onset of the diarrhœa. At this time all traces of blood disappeared from his sputa. Death occurred twenty-six days after his admission.

Autopsy twelve hours later. On opening the thorax, the pericardium was found somewhat thickened and universally adherent to the heart. The right lung was bound down by old pleuritic adhesions at its base. It does not collapse, but crepitates throughout its anterior and upper portions, but at the posterior and inferior aspect it is carnified. Greatly-emphysematous patches occupy the anterior and inferior surface of the left lung, which crepitates throughout, except at the posterior inferior aspect, where there is a large dark area of carnification; its anterior border is enlarged and did not collapse, so that it must have projected across the median line. The left ventricle of the heart is very much enlarged, both the cavity and the walls. The same condition is present in the right ventricle, but less in degree. The pulmonary and tricuspid valves are natural; the aortic valves markedly thickened, stiff, and with rounded edges; the mitral flaps are enlarged, stiffened, thick, and opaque, and the opening is enlarged perhaps one-fourth. The heart-muscles look pale and seem hard. In the small intestine, for about five feet above the ileo-cæcal valve, Peyer's patches are enlarged, and ulceration has occurred in many of them. The liver weighed four pounds, and at the anterior margin, covering the gall-bladder, there was an abscess about the size of a walnut. A calculus was found in the cavity of the abscess, having provoked suppuration after ulcerating through the gall-bladder, which was much thickened and adherent to the under surface of the liver. Within the gall-bladder a large, fragile calculus, one and one-half inches long by one-half inch in diameter, was discovered. During life there were no symptoms pointing to this condition. True, elevated temperature was observed, but this was accounted for by the condition of the lungs and the typhoid fever.

This case fully illustrates the difficulties in diagnosis where several morbid processes are present. Prior to death, emphysema, pulmonary apoplexy, valvular disease of the heart with hypertrophy of its walls, and typhoid fever were diagnosticated; while there were no symptoms pointing to adherent pericardium, abscess of the liver, or gall-stones.

TRANSLATIONS.

Syrups of Hippurates of Calcium and of Lithia.—Dr. V. Poulet recommends the following formulæ:

1. *Syrup of Hippurate of Calcium.*—
   Pure hippuric acid, 100 grammes;
   Milk of lime, sufficient to produce an alkaline reaction;
   Hot water, 2 litres;
   Sugar, 2400 grammes;
   Spirit of lemon, 15 grammes.

Add to the acid a portion of the water (at 80° C.), and then gradually the lime (agitating the mixture), until it no longer reddens litmus paper, which requires about fifteen minutes to complete the reaction; then add the sugar and expose to gentle heat, and make a syrup, which is subse-

quently flavored with lemon. For diabetic patients the sugar can be omitted.

2. *Syrup of Hippurate of Lithia.*—

Lithium carbonate,	8 gr.
Hippuric acid,	35 "
Warm water,	1000 "
Sugar	1200 "

Add a little water to the acid, and then the lithium carbonate, so as to obtain a solution of alkaline reaction; then add the rest of the water and the sugar, and place upon a gentle fire. Each teaspoonful of syrup contains twenty-five centigrammes of the salt, in which there are but three centigrammes of the base.—*Bulletin Gén. de Thérapeutique*, August 30 and September 30.

Dr. Poulet has used the lime hippurate in diseases of the bladder with alkaline urine, in liver-affections with or without jaundice, and in diseases of hot countries, which are often attended by hepatic disorder. In skin-diseases, where produced by an attendant diathesis, whether gouty, scrofulous, or tuberculous, a useful field is presented for this agent. Affections of the mucous membranes are also cited as being favorably influenced. Cases of dyspepsia, diabetes, and chronic rheumatism are especially benefited by this treatment. The lithia salt is reserved for cases having the uric acid diathesis. A case of rheumatoid arthritis with deformity of the right hand was almost entirely cured by the use of the syrup of hippurate of lithia. The lime salt the author believes to be one of the best and most efficient agents of the materia medica.

Lymphoderma Perniciosa, a New Form of Skin-Disease.—A woman, 39 years of age, came under the observation of M. Kaposi (*Wien. Med. Jahr.*, 1885), having suffered for a year with an eruption which was diffuse upon the face, head, and neck, and irregularly localized in groups or patches on the hips and extremities. It was associated with a doughy swelling and thickening of the affected skin. In the several parts of the body named there had been developed, both in the corium and in the subcutaneous cellular tissue, numerous small growths from the size of a pea to that of a pigeon's egg; some of the tumors were dense, some apparently fluctuating, not distinctly circumscribed; and when opened, spontaneously or by incision, a custard-like, purulent material was discharged. The urine contained neither albumen nor sugar, but there was an enlarged spleen and a well-defined leukæmia. The serous imbibition and thickness of the skin attained, while under observation and after a transitory improvement, a still higher development; the tumors increased in size and number, so that the woman's features were finally rendered unrecognizable: she died very suddenly after five months' residence in the hospital.

In the post-mortem examination, in the locality corresponding with the tumors the adipose layer in the œdematous cellular tissue was changed into dense whitish-red masses, the overlying skin forming a bacon-like layer, which was not entirely distinct from the growth. The microscope showed the tumor, as a whole, to be partly supplied with vessels, with a delicate thread-like stroma, with its interstices crowded with lymphoid cells and nuclei. Similar new formations were discovered in the lung, the spleen, and the bone-marrow: the lymphatic glands had the usual characters of leukæmia. The connection between the dermatosis and the leukæmic process appears unquestionable.—*Centralblatt für Med. Wiss.*, No. 40.

Hydrofluoric Acid in Therapeutics.—Dr. E. Chevy (*Bull. de Thérap.*, p. 108), after investigating the properties of this acid and observing its effects clinically, arrives at the following conclusions:

1. The vapors of hydrofluoric acid, mixed with air, do not produce the respiratory accidents which we have hitherto been led to suppose. Without inconvenience, an adult can breathe a mixture of one to fifteen hundred parts of atmospheric air.

2. Hydrofluoric acid is a powerful antiseptic and antiferment. In the proportion of one to three thousand, it arrests the fermentation of milk, of urine, or of soup, and can be used for the preservation of meat.

3. The therapeutic employment of hydrofluoric acid in pulmonary tuberculosis, in diphtheria, and in the dressing of foul wounds, has furnished results which are worthy of being followed up.

4. In a case that is asthmatic, hæmophilic, or emphysematous, it should be employed with great prudence.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, OCTOBER 31, 1885.

EDITORIAL.

MAY CRIMINALS BE USED FOR PHYSIOLOGICAL EXPERIMENTATION?

FROM time to time the intimation is given that there is much good "material" wasted in the ordinary process of law, and that crucial physiological experiments might properly be made upon condemned criminals for the benefit of science; and the argument, when viewed solely from a medical stand-point, is a plausible one. The *Indian Medical Gazette* contains an editorial urging the practice on the score of humanity, and suggesting that out of the three or four hundred criminals who suffer the extreme penalty of the law annually in India some might be obtained upon whom experiments could be made,—for instance, to decide finally the question as to the contagion or non-contagion of cholera,—offering pardon to those who survive. The men are doomed, a chance of escape is offered, science will be advanced, and humanity will be benefited.

Unfortunately for the position of the advocates of experimentation *in corpore vile*, there are several objections to it which appear insuperable. In the first place, when a guilty wretch has been condemned to death, the sentence is based upon the deliberate conviction that no less punishment will satisfy the demands of justice and outraged law; and, after searching judicial investigation, no doubt remains that a milder sentence would be inadequate to the protection of society and unsuited to the grade of his offence. Here is a dilemma. A criminal's life is forfeited to outraged law. Science asks for his body for experimentation, but evidently it can be delivered only under a pledge that the sentence of the law shall be fulfilled and that the criminal shall not be permitted to survive. But in civilized communities the condemned is protected by public sentiment and legal enactment against cruel and unusual forms of punishment; consequently the kind of experimentation that is proposed could be carried on only with the consent of the victim. Such consent, however, might be obtained by holding out the hope of recovery and freedom. Is it possible, we ask ourselves, that any could be found so utterly heartless as to approach a poor, condemned wretch with promises of health and security, and with a refinement of cruelty make use of him for physiological experimentation, and when finished, while he is still buoyed up with hopes of life, give him his death-blow with the hypodermic needle? Even could such a monster be discovered, he certainly would be denounced and his work disowned by the medical profession at large, the mission of which, in the words of Baron Larrey, is to cure, and not to kill.

It may be urged that such a promise might be made in good faith, and that the man, by a desperate chance, might escape, and while it is true that the chances would be very much against him, still he need not necessarily be killed by the physiologist. True; but, if he survive, a new and very serious question arises: What will be his future status in society? The law having declared him to be such an enemy to the community that its only safety consists in destroying him like a wild beast, and that his life is justly forfeited, how is the law to be satisfied? Can moral regeneration be secured by inoculation with comma-bacilli? Will a bad man, as the result of vaccination, or artificially induced cholera, have his nature so changed that he will become a good citizen and fit to be trusted with the ballot? What becomes of the sanctity of the law and the stability of society if a man may commit murder and escape with

the infliction of a diarrhœa, or sickness more or less severe, at the pleasure of his physiological humanitarian friends?

Without discussing the question further, we will merely say that the suggestion is impracticable and discreditable to our age and modern civilization. There was a time when condemned criminals were handed over to the doctors to be experimented upon until finally despatched with a drachm of opium. That time has passed. The world indeed moves. Truth is still earnestly sought for, but only by justifiable and legitimate methods:

"Weh dem, der zu der Wahrheit geht durch Schuld!
Sie wird ihm nimmermehr erfreulich sein."

ABDOMINAL TAXIS FOR OBSTRUCTION OF THE BOWELS.

IN the first of a proposed series of lectures upon the treatment of cases of obstruction of the bowels, Mr. Jonathan Hutchinson (*Medical Press and Circular*, October 7) advises a method of treatment which he described in a paper written a good many years ago as "abdominal taxis." This term was employed in order to distinguish it from taxis in hernia, and was intended to be applicable to certain manipulations used for the reduction of strangulated hernia within the cavity of the abdomen. Essentially differing from the conclusions of Mr. Treves at the recent session of the British Medical Association, who, in cases of acute obstruction, advocated absolute rest, and, if the symptoms do not promptly yield, early laparotomy, Mr. Hutchinson, in dealing with acute intra-abdominal obstruction of the bowel, recommends the following course: "First, the patient shall be placed in a state of anæsthesia to a full extent of insensibility, so that the abdominal muscles are all fully relaxed; then the surgeon is to manipulate the abdomen, pushing the intestines backwards and forwards vigorously as a mass; then he is to shake his patient after several strong assistants lift the patient, and shake the patient vigorously from side to side, and backwards and forwards; then he is to be held in the inverted position and vigorously shaken, so as to allow of any coil of intestine which may have been twisted having a chance of slipping back again. There are various other little details: for instance, he should be placed upon his back, with his feet on the bed, and shaken. Lastly, in these altered positions he is to have enemata given him, copious enemata, and this especially while he is inverted."

This appears like vigorous treatment,—certainly one which requires discrimination in the selection of cases. It is recommended in all cases of obstruction "in which no hernia can be discovered and where no diagnosis can be made, such as of intussusception," and where no more special mode of dealing with the cause of the obstruction can be adopted, and may be repeated daily until the patient is relieved or he passes into a condition where it is obviously useless. Full doses of belladonna are of great assistance, and in a good many cases a laxative may be judiciously used, such as Epsom salt in very small doses repeated every two or three hours.

The taxis should be resorted to, in Mr. Hutchinson's opinion, in every case of abdominal obstruction directly after it passes the limits of mere constipation and as soon as it has been made certain that the obstruction is not low down or owing to hernia. The patient should abstain from food, should receive rectal nutritive enemata, and be kept under the influence of belladonna and opium. Several successful cases are reported by the lecturer, one of which was relieved only after being tossed in the air upon a sheet, and afterwards stood upon his head while an enema was administered.

In elderly persons, where the site of the stricture is thought to be in the colon

itself, and probably malignant, lumbar colotomy is preferred to abdominal section. Where intussusception has been diagnosticated, laparotomy is advised; but the eminent lecturer thinks that the exploratory operation merely for diagnostic purposes ought never to be done. By this practice he believes lives have been sacrificed which might have been saved, and he accordingly enters a protest against early or exploratory laparotomy. In recording this opinion, however, he states that it is one which he holds subject to recantation in future years: in the further advance in surgery it may be found to be bad advice. There are some who may feel inclined to make this criticism now; but the experience and deliberate judgment of such an authority as Mr. Hutchinson are certainly entitled to most respectful consideration.

EXAMINATIONS TO BE REQUIRED BEFORE REGISTRATION.

BY the provisions of Section IV. of the Act of 1881, known as the Registration Act, the duty is laid upon the faculties of the medical colleges and universities in this Commonwealth of examining the diplomas of all persons desiring to enter upon the practice of medicine in this State by virtue of a diploma issued by any college, university, society, or association in another State or foreign country; "and the faculty, being satisfied as to the qualifications of the applicant and the genuineness of the diploma, shall direct the dean of the faculty to endorse the same; after which such person shall be allowed to register" in the manner prescribed by another section of this Act.

Hitherto the Philadelphia Colleges have merely passed upon the genuineness of the diploma, without testing the qualifications of the candidate; but, by a recent decision of the Supreme Court, the colleges must obey the literal construction of the law and satisfy themselves of the attainments of the applicant. Accordingly, Prof. Tyson, the Secretary of the Medical Department of the University of Pennsylvania, has just issued a circular announcing that "In the future, all persons desiring from the University of Pennsylvania the endorsement on the diploma demanded by Section IV. of the Act of 1881 will be required to pass an examination on chemistry, anatomy, physiology, materia medica and therapeutics, pathology and morbid anatomy, practice of medicine, surgery, and on obstetrics; failure in any branch will cause rejection."

A similar course has been decided upon at Jefferson College and the Medico-Chirurgical College, in conformity with the requirements of the law; and hereafter the Philadelphia schools will follow a uniform rule and will refuse their endorsement of any diploma, even if the genuineness is unquestioned, until they have been satisfied that the professional attainments of the applicant are at least up to the standard attained by their own students. This is, indeed, only justice to themselves, for their endorsement upon a diploma is popularly construed as being equivalent to conferring their diploma upon the applicant.

WE believe (1) that a successful and thoroughly creditable meeting of the International Medical Congress will be held in Washington in 1887.

2. That, in spite of malcontents and irreconcilables, existing difficulties will be successfully surmounted under the guidance of Drs. Flint and Davis and the Executive Committee.

3. That a way will be provided for those gentlemen who resigned under a misapprehension to return and accept the offices to which they were originally nominated.

4. That several aspiring Hamlets will be absent when the final cast is made for the play, and they will not be missed.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE different medical schools have now opened for the winter session. The addresses were delivered on the afternoon of the 1st, and on that morning the *Standard* (which takes a good deal of interest in medical matters) came out with a leader on "Medical Education in London." From time to time I have criticised the present teaching in what some readers might regard as a hostile manner, and attribute to the fact that my early efforts to become connected with a teaching hospital were not successful,—a fact which now causes me no regret. A few quotations from the leader, which is obviously written by a man familiar with the facts, may support the position and attitude taken upon the subject.

"It requires some exercise of the imagination to trace a resemblance between the Medical Faculty of London and that of any other European centre of learning whatsoever. Nowhere else is there so little of the academical spirit, so much indifference to organization, or so little trouble taken to select and appropriate for the great purposes of professional exposition and guidance those who have the true *facultas docendi*. The reasons assigned for this second-rate position are various. According to some, it is owing to the vexatious obstacles, like so many hurdles in a race, put in the way of all but those students with the longest purses and the greatest staying power in their endeavors to crown their term of study with a University degree. Others declare it is due to the hap-hazard way in which teaching appointments in the London schools are made, and the cynical maxims about the inutility of lectures which most of the metropolitan medical teachers have come to adopt. According to yet another set of critics, the reason is that medical science has become largely an affair of the work-room, demanding well-appointed laboratories, such as the schools attached to the London hospitals cannot provide unless they join their resources for the purpose, and to that extent efface their individual existence."

The writer then goes on to consider the position of the two great medical corporations which are now talking over the prospect of a conjoint examination which shall carry with it the coveted M.D., and says, "There is no room for doubt as to the particular duties that the two royal corporations are called upon to assume so as to entitle themselves to academic rank and privileges. The work lies ready to their hand, and has so lain for a good many years past." This is rather severe upon the corporations. He then invites them to put their best foot foremost, and evolve order out of chaos, to provide and control laboratories, and the professors of various kinds in all the great subjects of study, just as they now provide museums, libraries, and examinations. "Then, and then only, will they be entitled to ask for a charter conferring academical privileges." The millennium will arrive before they are qualified to ask for these academic privileges.

The College of Surgeons has a library, a museum, and examinations; but the Royal College of Physicians has only examinations, for its library is contemptible, and museum it has none. Neither has it funds to do anything with. It is as poor as a church mouse; while the College of Surgeons recently fell heir to something near a quarter of a million by the will of the late Erasmus Wilson, of skin-disease fame. How the College of Physicians is to comply with the writer's expectations it is not easy to see. "The College of Physicians has public duties as real as in the days of Linacre, although of a new complexion. They cannot and must not decline the growing obligations which circumstances conspire to urge upon them." It may be safely averred that it will carefully "conspire" how to get out of these "obligations." It has just issued a new Nomenclature of Disease, and made a mess of the Pharmacopœia; but for any healthy purpose it has neither capacity nor inclination. Instead of its once-honored position, it has now sunk to an object of derision, into a semi-respectable dotage, from which nothing less than a miracle can rescue it.

The most important address was that delivered by Jonathan Hutchinson, F.R.S., at the Yorkshire College, Leeds. He explained that, "a Yorkshireman myself, apprenticed and educated in my native county," it was a peculiar pleasure to him to address his audience. He went on: "So far as this world is concerned, we can find perhaps no better symbol of human life than that given by an evergreen tree. The leaves are the generations of men; the root, stem, and branches the social institutions by which each successive generation is borne up into higher life. We live in the most literal manner upon the past, and are what we are in virtue of its former life. If during any one year the production of leaves had failed, if they had been found unequal to their task, the death of the tree in part or in whole must have followed, and no further outbursting of the leaves would have been possible. Upon the vital vigor of each generation has depended, in the past, the growth of the tree. They were the digesters of its sap; they prepared its wood. It is, of course, a mistake to suppose that evergreen trees do not shed their leaves: they simply escape to a larger extent the influence of season, and retain their leaves longer than others; but, as any one who has stood under a fir will know well, their leaves are constantly submitting to

death when old, and are replaced by new ones. An evergreen, therefore, rather than one which becomes bare every winter, must be our symbol, and none perhaps better than the Norway pine. Any one musing upon the magnificence of this splendid tree may usefully remind himself of the beneficence of the law of individual death. It is thanks to that law that its growth has been attained and its greenness made lasting. Each successive generation of leaves has taken up the work of its forerunners, and, 'eager to do and die,' has in turn submitted to the same fate. The result has been increasing growth and perpetual youth. There has been permanence of life amidst unceasing change. So it is in the human family." The prejudices, the narrow formularies, and the erroneous conceptions of the past fall with the dead leaves. "No process of cleansing the battered, soot-begrimed leaves of last season could compete with nature's plan, which covers the tree with new and untarnished foliage."

He went on: "The law of limitation in reference to memory is, I think, not sufficiently taken account of in education. It is most clearly the fact that the packing of our minds is like the stowage of a cargo. We cannot put in more than a certain quantity. Dexterity in arrangement will go for something, but it has its limits, and when these are reached it is impossible to put in fresh articles without displacing those already there. The busy man with his mind hurried from one topic to another, and still more those whose minds are exposed to grief, sorrow, or anxiety, will realize this, and may sometimes amaze their less-occupied brethren by their capacity for forgetting. This physical limitation in the number of our brain pigeon-holes is a fact we will do well to remember. Do what we will to improve and develop our faculties,—and we can do very much,—yet sooner or later a limit is reached, and we are then compelled, however reluctantly, to choose what we will keep and what we must surrender to the waves of oblivion." He thinks the old suspicion, that the more a man knows outside of medicine the less he knows of his own subject, is not without some valid foundation. To some may be given the power to know several things, but not to all alike.

He then discussed "knowledge" and "wisdom," and showed the latter sprang from the former. "It is only when we begin to believe in earnest that we reap the reward of knowledge. The sceptic and the half-believer must not hope for the joys of faith. The mellowing influence of creed on character cannot come to him who doubts." For those who tremble for the consequences of our giving up the Mosaic cosmogony the following words will carry comfort: "It will require several generations for us to realize the full influence of recent revelations in science. The doctrines must have been taught familiarly in childhood, their influence must have been transmitted hereditarily, before we shall be able to see what it really is. It would shake my belief in the relation between cause and effect if I could doubt that the influence of modern knowledge in reference to the history of the world and of man, and the relations of man to animals, could be other than ennobling. We shall witness from such causes an increased sense of dignity in life. Mankind will become more sincere, more earnest, more sympathetic, more hopeful, and our gain in all these respects will be the result chiefly of increased confidence in terrestrial life." He thinks that Latin and Greek may be allowed to drop out of our scholastic education, to give way to matters of wider usefulness. Even in the matter of scientific terms, he thinks "the preference of the professors of science for terms taken from the dead languages is, again, the mere survival of a bad custom, and one from which it is our duty to free ourselves as soon as possible." He thinks a great many of such terms might as well or even better be expressed in English. Pedantic words are a hinderance to the spread of knowledge. Indeed, even the learning of modern languages is too much insisted upon, he holds. He was decidedly funny in his denunciation of this educational hobby. For many persons it is highly convenient to know one or more modern languages, but for the majority this is useless. "Far better that a young man should know well the general course of French history, and be familiar with the lives of its heroes, its men of science, and its saints, that he should have followed carefully the struggles of the Huguenots and watched the long-gathering causes which led to the Revolution, than that he should know ever so perfectly the irregularity of every French verb." Whether we agree or not with all Mr. Hutchinson said, few will refuse assent to this last expression of opinion.

He continued: "What I have wished to say is, simply, that we should do our best to put a right value on things, and not waste time and labor in planting laurel-bushes in mistake for apples. Let me urge once more, and even at the risk of being wearisome, that we must distinguish between the knowledge that is fruit-bearing and that which is likely to prove barren, however ornamental or fashionable it may be." Then, with a natural eulogy of Yorkshire and some good general advice about their work, he concluded: "Do not think lightly of your own individual value in this world's work, and always think hopefully of the world's progress. The world, you may feel sure, never had a more happy day than that in which you were born. Lest you mistake my meaning, let me hasten to add that it will be happier still on the day you die; and permit me to take leave in urging the reflection that the ratio of its gain in happinesss will depend in some degree, now and forever,

upon how you live." There is much material for thought in the great surgeon's address.

At University College the address was delivered by Prof. Schaefer, F.R.S., which, as might be expected from the Jodrell Professor of Physiology, took a physiological direction. He said, "In considering the matter of education for the medical profession, we must, first of all, understand clearly what it is that the education in question is designed to attain. It is important, above all, to remember that it is education for a profession, and not for a trade, that is required; and, more than this, for a liberal and learned profession." And this is what he holds: "There should be the same acquaintance with classics and mathematics, the same knowledge of the English language and literature, of history and of geography, and of one or more modern languages, which are regarded as forming the essential elements of the education of an English gentleman." He goes on about the importance of acquaintance with Latin and Greek in a manner the very opposite of Mr. Hutchinson. He then gave a cold shoulder to school teaching of science and physiology, and quoted some most amusingly incorrect answers to sundry questions in physiology. After leaving school, the youth who would enter medicine should give a year to physics, chemistry, and biology. "To take a lad straight from school,—or perhaps to allow him first to waste a year or more bumping about on country roads in a doctor's gig, under the idea that he is thereby acquiring an insight into medical science,—and to send him to study physiology, to say nothing of pathology, without his having acquired even the most rudimentary notions of chemistry, physics, and biology, is to compel him to learn that subject without understanding it, to rob it of all the interest which it possesses, and is fatal to the future comprehension of the physical and vital problems of medicine and surgery." He then goes on to talk like a man who never felt a patient's pulse or inspected a tongue, or sat in a solitary cottage half the night with a peasant's wife in labor. Fine country doctors his ideal students would be, heaven knows. No doubt he is right in insisting upon more intimate familiarity with the subject he himself teaches; and more time might be devoted to the physiology of the digestion, even at the expense of the origin and insertions of most muscles and other "dry anatomical details, many of them of no possible application, and most of which are often forgotten after the examination in far less time than they have taken to acquire." He would have the physiological laboratory to stand on an equal footing with the dissecting-room. He clearly distinguishes between physiology and "histology." As to such a physiological laboratory he says, significantly, "Be sure it will never be done so long as the present ruinous system between the London medical schools continues." He then criticises the present teaching of materia medica, and condemns it in no measured phrase. He said, "Both in teaching and in examinations the subject ought to be shorn of its preposterous proportions and reduced to its legitimate level." He then said, "Amazing as it may sound to a Continental reader, there is not a genuine pathological laboratory attached to a single medical school in this great metropolis. The only pathological laboratory I know of in London is that belonging to the Brown Institution, which institution, I may inform the intelligent foreigner, is a dispensary for dogs."

As to that department of physiology, the action of medicinal agents upon the living body, he says, "Probably not a single room is set aside for the carrying on of private research. Certainly there will not be found any means of enabling the intending medical man to study the action of those drugs which he is afterwards, often blindly and fortuitously, to experiment with upon his unfortunate patients."

As to examinations, he thinks the best plan would be to see how to do without them altogether; but, unfortunately, he does not see how this can be done. He thinks that the large sum bequeathed by the late Erasmus Wilson to the College of Surgeons ought to provide the expensive laboratories required for the proper teaching (in London) of medicine. "And why should not London obtain what other cities and towns find no difficulty in obtaining?" Why, indeed? There is something wrong somewhere.

At St. Mary's Hospital Mr. Pepper gave the address. He, too, was on the same string,—"The tension which at present exists betwixt medical education and the examinations." He did not approve of the London University lowering its standard in order that ordinary students should get an M.B. easily. He was in favor of a teaching university for London. If the medical corporations had any real "go" in them, they would do something after all the exhortations they received. He thought it possible to give an interest to otherwise dry anatomical details. "The action of the superior oblique muscle of the eye, as learned at lecture, was to the student of anatomy a mere fact and nothing more; and a few days would probably suffice to free his memory from a burden imposed neither by choice nor desire. But who would or could forget the bewitching lines of Longfellow?—

> "'She gives a side-glance and looks down.
> Beware! she is fooling thee.'"

Certainly, if Mr. Pepper can lecture on anatomy after this fashion, he will soon become even more popular than he is at present.

J. Milner Fothergill.

NEW YORK.

THE mortgage on the property of the Academy of Medicine has now been entirely paid. The announcement of this fact at the last meeting of the Academy was greeted with applause, and well it might be, for perhaps no other medical association in this country has risen to a higher position of usefulness in scientific and educational work, or commanded greater respect or exerted greater influence at home and abroad. While it has occupied a position of dignity, it has not been so aristocratic or exclusive as to cause any physician, however humble, to feel that he was not welcome to the use of the library or to profit by listening to the reading of papers and their discussion. The Academy has been having a large increase in its membership, which tends both to widen its usefulness locally and to add to its funds. The tendency of recent years to multiply medical societies, particularly in special branches, is perhaps nowhere more striking than in New York City. It is the plan of the Academy to have Sections in the principal departments of medicine. Heretofore this plan has been carried out only to a limited extent, but it is now receiving new life. In addition to the Sections already in operation, the organization of the Section in Surgery, with Dr. Stephen Smith as Chairman and Dr. Judson as Secretary, was announced at the last meeting of the Academy.

The question would probably suggest itself to all, Will this creation of Sections result simply in an increase in the number of medical societies in the city (of which we already have enough), or will the private societies now in existence become incorporated with the Sections of the Academy? If the latter event come to pass, it may prove an advantage to the profession in concentrating its forces and in presenting it as a united representative body which will exert a higher and a greater influence over the public, especially in matters of sanitation. But all probably would not feel convinced of the possibility of such a union, nor of its advisability. It might be claimed that generous rivalry would be an advantage as an incentive to scientific effort. Again, those who have risen to eminence in their profession, or have attained success financially, might feel at home in the select company of a few, while they would not care to appear in a general society among strangers. A man with an established reputation in the profession might lose nothing by being absent from a meeting or by not taking part in the discussion, while, if he should take part and allow his name to go on the records, some little-known men might seek prominence by having their names associated with his in debate. All medical men, even those who are most ethical, know that success depends upon reputation, and that there can be no reputation for one who is unknown. Consequently all desire a wide and a good reputation, but they wish to avoid dubious methods of making themselves known, such as by vulgar advertising and mention in the daily press. The physician who does a consulting practice is dependent largely upon his professional brethren, and his reputation is spread through mention of his name in medical literature and in connection with hospitals and other public institutions. When his reputation is once fully established in a certain branch of medicine, he will always be expected to take part in the discussion of any topic pertaining to that department, and he may prefer to associate only with those who have an equally well established reputation.

It is to the credit of our profession that its members generally do not take part in a discussion unless they have something of value to say; but now and then we meet with those who gain the reputation of being chronic talkers because of an apparent resolution always to say something in order that their names may enter the journals. Some of the private societies require of their members in turn to read a paper upon some subject, thus insuring good work at every meeting by prominent men. It would not, of course, be desirable to make such a rule in a general society. Again, societies from which any member of the profession in good standing would not be excluded might fall into ruts, or become governed by a clique. We have seen examples of this sort. Whether or not any of these facts would offer themselves as objections to merging the special societies into the Sections of the Academy, it is true that the officers of the Academy have strengthened their position by obtaining, as chairmen of Sections, generally those whose scientific work has given them an enviable reputation. The intention to keep the Academy an exclusively scientific body, if carried out, will secure it against the dangers of medical politics.

While on the subject of the Academy, I might add that the President has extended an informal invitation to the members and their friends to be present at his house on the evening of October 29. I might also say that the late President, Dr. Fordyce Barker, who had been ill, at last accounts was convalescing and able to go about.

The reports of the Board of Health have recently contained from one to four cases of smallpox weekly, but we have not yet had the outbreak which has been feared in view of the epidemic at Montreal. It is safe to say that we will not be afflicted with either cholera or yellow fever, at any rate before the return of summer.

The first fall meeting of the New York County Medical Association was held Monday, October 19, Dr. C. A. Leale, President. Dr. Frederic S. Dennis read a paper on "Fracture of the Patella," and showed illus-

trative cases of treatment by wiring the fragments. The treatment advocated was that of wiring the separated bones under strict antiseptic precautions, thoroughly cleansing the limb with soap and water and bichloride solution, and irrigating with the bichloride solution (one to three thousand) during the operation, the dressings being also antiseptic. Statistics since 1883 showed this operation to be almost free from danger to the life of the patient. Suppuration did not occur, union of the fragments of bone took place, as did primary union of the soft parts, and it was safe to allow the patient to be up on the third week. But it would be criminal for one to wire the fractured patella if he did not believe in antiseptics and should fail to carry out every detail of the method in a faithful manner. Dr. H. M. Biggs then showed the micro-organisms of osteomyelitis, and the President exhibited some nummulites from the foundation-stone of Cleopatra's Needle in Central Park. Dr. Faure, lately of the French navy, was introduced, and exhibited a serre-nœud of which he was the inventor. Dr. Gouley regarded it as the best instrument of the kind which had been made, and thought it would be especially useful to ovariotomists in exerting constant traction upon the ligature applied around the pedicle, tending to tighten it. R. C. S.

NEW YORK, October 21, 1885.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA ACADEMY OF SURGERY.

A MEETING of the Philadelphia Academy of Surgery was held October 5, 1885, Vice-President Dr. R. J. Levis in the chair.

FOREIGN BODY CAUSING VESICAL CALCULUS.

Dr. J. Ewing Mears: I desire to present to the Academy a urinary calculus removed from a patient in St. Mary's Hospital three weeks ago. The patient was a man from the interior of the State, 56 years of age, who had been suffering with bladder-trouble for nine months. There had been difficult micturition, with pain, and the diagnosis of inflammation of the bladder had been made. Six months ago, in order to relieve the difficulty in passing water, he said that he had introduced a straw some two or three inches long. He was under the influence of liquor at the time, and the straw slipped from his grasp and entered the urethra. His symptoms then became more marked, and he came to this city. I introduced a sound, and discovered in the bladder the stone or mass which you see. The urine was carefully examined, and it was found to contain a large quantity of albumen and also phosphatic deposits. The question arose, in view of the man's habits, his age, and the condition of the urine, whether it would be better to perform lithotomy or lithotrity or litholapaxy. Under the circumstances, I considered lithotomy the preferable operation.

I cut the man, and in so doing opened an abscess in the prostate, evacuating about an ounce of pus. I then entered the bladder and removed this cluster of calculi with a scoop. The bladder was then washed out, and in two weeks the man returned to his home with the wound entirely closed. At the end of this time, examination of the urine showed that its character was greatly improved.

It was certainly fortunate that section of the perineum was decided upon. The abscess was not recognized before operating, although exploration of the perineum was made. There was no pain, no swelling, and no tenderness.

The question arises in such cases as this, where the age of the man, his habits, and the composition of the urine indicate serious vesical and possibly renal disease, whether it is better to perform lithotomy or the crushing operation.

Dr. Levis: How would the introduction of a straw account for this fimbriated character of the mass? If a head of wheat or barley had been passed, it might explain it.

Dr. S. W. Gross: Close examination will show that this is a spear of some grain, and that these little calculi are formed around the hairs of the grain.

Dr. Nancrede: Could not the albumen in the urine come from the abscess in the prostate?

Dr. Mears: It did not seem possible that the abscess communicated with the bladder. When I opened the abscess, I at first thought that it was connected with the bladder; but further examination showed that such was not the case. The abscess might have been due to the impaction of one of these little masses in the duct of the gland, for I neglected to say that he had passed a number of these masses through the urethra.

EXCISION OF THE SCAPULA.

Dr. John Brinton: I have a specimen which I removed on Saturday last. It is of a good deal of interest: first, from the character of the tumor, and, secondly, from the magnitude of the operation required for its removal. The operation consisted in the removal of the entire scapula, performed on a girl of eleven years of age for a formidable tumor. I may say here that the operation was unsuccessful so far as the life of the child was concerned, as the patient sank rapidly from shock, and died an hour after the termination of the operation.

The history of the case is simply this. A little girl, 11 years of age, living in the interior of the State, while playing under an apple-tree growing on a declivity, caught hold

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of one of the branches and swung herself. The branch gave way, and she fell backward, rolling some six or seven feet, and striking the scapula upon a little projecting edge of stone. The pain from this continued for about an hour and then passed away, and there was no more trouble until last April, when she began to complain of pain over the right infra-spinatus fossa of the scapula. About the latter part of May or the early part of June swelling made its appearance, and gradually increased until the tumor assumed formidable dimensions. At the time I examined it, the base of the tumor measured fifteen inches in circumference, and the general thickness of the shoulder was four or five inches greater than on the opposite side. The child was suffering greatly. The pain during the daytime was somewhat paroxysmal, but during the night it was almost continuous. For a number of nights she received from ten to fourteen drops of laudanum to give relief. During the night preceding the operation she was carried in a chair, to give her as much rest as possible.

The case was seen in consultation, and the diagnosis of rapidly-growing sarcoma was made. It evidently involved the whole dorsum scapulæ. After looking up the statistics of the operation, I decided to attempt the excision of the whole scapula. I ought to state that the parents were fully apprised of the nature of the operation, and all the parties concerned accepted the risks, owing to the urgency of the case.

On Saturday last the child was etherized, and, beginning at the point of the acromion process, I made an incision, carrying it to the posterior edge of the scapula. The incision was not at first carried the entire length, because I wished to divide the acromio-clavicular articulation as soon as possible. The idea was to save every drop of blood that could possibly be saved. I had gathered from the reports of cases that the great peril was from hemorrhage. I therefore commenced with a moderate incision, so as to divide the acromio-clavicular articulation. The incision was then swept across to the posterior portion of the bone. An incision was next made at right angles, and the incision (somewhat curved) was carried below the angle of the scapula and the four flaps dissected up. Then I commenced at the upper part of the bone, dividing the muscles, and then passed slowly down, dividing the muscles,—taking the precaution, where there was any chance of considerable hemorrhage, to include the mass of muscle within a ligature before dividing it. Where there was no danger, a mass of tissue was grasped between two large forceps, such as I formerly used for the extraction of bullets. The incision was then carried along the posterior border and the muscles divided; it was next carried under the inferior angle of the bone and the parts raised. The incision upon the anterior costa of the scapula was carried up, the vessels being compressed; and thus, the parts being lifted, I opened the capsular ligament and turned out the head of the humerus. I next divided the heads of the muscle attached to the coracoid process. I had already divided the muscles along the spine. The bone was then readily lifted up, and the hemorrhage was comparatively small. Performing the operation in this way, only one or two vessels required ligature after removal of the bone.

Examination of the tumor shows that it consists of two portions; that upon the dorsum has been incised, and my finger goes directly to the bone, which is entirely destroyed, showing that the growth sprang from the periosteum. In examining the case before the operation, Dr. Gross and myself noticed a mass inside of the axilla. I then thought that the mass must depend upon a prolongation of this mass of morbid structure. It, however, depended upon a mass of tissue developed from the venter of the bone. These masses are continuous at the junction of the upper and middle thirds of the inferior costa. It was the posterior mass which projected into the axilla. This lifted the scapula from the chest and increased the apparent size of the tumor on the dorsal surface.

Statistics show that the mortality following the operation is greater where a portion of the bone is left than where the entire bone is removed. In forty cases of entire removal, the mortality was twenty per cent.; after partial removal, twenty-one or twenty-two per cent. Where the scapula was removed after amputation of the arm, the mortality was twenty-four per cent.

The microscopical examination of this growth by Dr. Longstreth shows that it is a well-marked example of round-celled sarcoma.

One other case of complete excision of the scapula was performed by Professor Agnew some years ago. The patient died in a short time from shock. Two partial operations were performed by the late Professor Gross.

Dr. R. J. Levis: Once, when contemplating an operation of the same kind on an adult with a large tumor,—an operation which I did not perform,—I determined upon an expedient to prevent severe hemorrhage. That was to tilt out the scapula and apply Esmarch's bandage around it, enclosing the axillary artery high up. To prevent slipping, a bandage was to be placed in front, under the rubber tube, drawing it to the opposite side.

Dr. J. Ewing Mears: We would not expect much hemorrhage from a tumor which seems, as this does, to be, as it were, enucleated. In this case the muscles are not attached to the growth. Where, however, there is a malignant growth which infiltrates the tissues and

envelops the ramifications of the blood-vessels, the bleeding may be severe and prove fatal.

I would ask Dr. Brinton if, when he turned up the mass towards the axilla, he brought into view the axillary vessels.

Dr. Brinton: I did not. I saw the subscapular artery and nothing else.

Dr. Mears: I refer to that point for this reason: that in some cases, where the growth involves the entire arm, it is necessary to extirpate the scapula with a portion of the clavicle, and also the entire arm, and it has seemed to me that in such cases it might be possible, by tilting up the scapula, to reach the axillary artery and surround it with a ligature before amputating the arm. I have not found this method of controlling hemorrhage prior to disarticulation referred to.

In considering the mortality-rate after excision of the scapula, it is desirable to consider the causes for which the operation is performed. It has been performed for necrosis, for gunshot injuries, and for tumors such as enchondromata, sarcoma, and malignant growths. In necrosis of the entire scapula, where the disease is of some duration and where there is great inflammatory thickening of the periosteum, removal of the scapula is comparatively easy. An incision made along the spine to the posterior border and then continued along the posterior border will enable the operator to lift the periosteum with an elevator periostome or the handle of a knife. In that way the muscular attachments may be severed. Such an operation gives a better mortality-rate than do operations for malignant growths, and, if I remember correctly, better than for operations for the removal of portions of the bone in compound comminuted fractures, the result of gunshot injuries.

Dr. Brinton: In this case there was no difficulty in compressing the subclavian artery with the finger. This was done by Dr. Hearn. In some of the reported cases the pressure has been made directly. In some of these cases, as soon as the acromio-clavicular articulation has been severed, the coracoid process has been broken and pressure made directly upon the artery.

Dr. Levis: Did the patient seem much depressed by the anæsthetic?

Dr. Brinton: She came from under the ether very well.

Dr. Hearn: The child was never thoroughly anæsthetized at any time. I do not think that the anæsthetic had anything to do with the fatal result.

CONGENITAL MALFORMATION OF THE COLON.

Dr. Charles B. Nancrede: I have here specimens of some little interest. They are the terminal part of the rectum and the caput coli, which were removed from an infant 50 hours old. The child had been delivered with instruments, and seemed to be in perfect health until the second night, when the nurse sent for me and said that there was something wrong,—that the child was crying and straining, but had not soiled any napkins.

On examination, I found a well-formed anus, into which I could introduce my finger one-third of an inch. It was a female child, and I could therefore make a thorough examination; but I could detect no bulging at any point. As it was twelve o'clock at night and the distention was not great, I gave an opiate, and the next morning at eleven o'clock Dr. Ashhurst met me in consultation. Neither of us could feel any bowel, but we thought it right to make an effort to reach the bowel. I dissected along the hollow of the sacrum up to the promontory, but could not feel the gut. We then decided to perform the operation in the right inguinal region, and I opened what I supposed to be the sigmoid flexure; but it proved at the post-mortem to be the caput coli. As soon as the peritoneal cavity was opened, about an ounce of serum escaped, and with it the right Fallopian tube, which was intensely congested. There was marked peritonitis. The child lived four and a half days after the operation. The meconium passed freely, and afterwards the discharges were natural. The child died from exhaustion, evidently due to the peritonitis.

The post-mortem showed that if I had detected the bulging bowel, which I must have felt, as it was near the end of my incision, I should almost inevitably have cut through two layers of peritoneum. There was a space about as wide as a director where the bowel was not covered by peritoneum, and I should have left behind the peritonitis. The question arises in these cases, if peritonitis does set in so early, and if death results, as it usually does, from peritonitis, whether it is worth while to add the double danger of two operations, especially in female children where it is impossible to detect any sign of the bowel.

Dr. Levis: Does Dr. Nancrede think well of operating before the sac becomes distended?

Dr. Nancrede: Unless something is done, the patient dies early. I notice that Bryant has called attention to the fact that peritonitis sets in very rapidly, and that in true obstruction death is frequently due to peritonitis. In this case the peritonitis was very marked at the end of fifty hours.

Dr. Levis: I have never done any operation except in the fundament. I would not like to save a child's life with an anus anywhere but in the fundament. I have always been able to find the sac and to bring it down and stitch it to the skin.

Dr. O. H. Allis: At the post-mortem, how far were the two blind sacs from each other?

Dr. Nancrede: I should say about an inch. I must have touched the bowel with my finger, but did not recognize it. Bryant strongly

advocates the operation in case of deficient rectum, and the opinion of a man who has had such an exceptionally large experience in the surgery of the bowel in general, having reported eighty-two or eighty-three colotomies, ought to count for a good deal. There seemed to be no more difficulty in retaining the fæces in this case than where the anus is in the normal position. Sometimes hours would pass without anything coming. In this case I think it would have been impossible to bring the bowel down and stitch it.

TREATMENT OF CARBUNCLE.

Dr. James Collins: I have lately treated two cases of carbuncle on the back of the neck by a method which seems to have some advantages. The patient is put under the influence of an anæsthetic, and a linear incision made. I then take a scoop and remove all the necrosed tissue, and wash the parts thoroughly with an antiseptic solution of mercuric chloride. I then put in a drainage-tube, and insert two stitches to bring the central part together. Each day the cavity is thoroughly washed out with the antiseptic solution. The patients have done well, and the cicatrix has been less than after any other method I have tried. The success depends upon the removal of the necrosed tissue and the use of the antiseptic solution.

Dr. S. W. Gross: The plan of Dr. Collins is, I think, based upon proper principles. I consider it far the best operation yet suggested. By scraping away all the dead tissue he gets rid of the micrococci which produce putrefaction, which give rise to the sloughs. The application of the corrosive sublimate destroys the micrococci which line the walls of the cavity, and in that way removes the cause of the disease.

Dr. Mears: I would ask if Dr. Collins, in scooping out the dead tissue, found anything like a thickened wall limiting the mass to be removed, and if he was able to satisfy himself that he has removed all the dead tissue.

Dr. Collins: I keep on scooping out until I reach a denser structure. The difference seems to be in the denseness of the tissue. The healthy tissue seems to be firm.

Dr. Levis: The operation of excision of carbuncles in their incipiency has been repeatedly advised and practised. In cases of constantly-recurring carbuncle I think that excision would be of service.

Dr. Hunt: I have been trying to recall a case of carbuncle on the back of the neck of a woman. I cannot recall a case. I would ask if this is the experience of the other members, and, if so, what reason can be given for this peculiarity.

Dr. Collins: I remember one severe case.

Dr. Levis: I cannot recollect a case.

Dr. Nancrede: I have seen a fatal case in which the carbuncle was on the side of the neck of a woman.

NITROUS OXIDE GAS IN THE EXAMINATION OF FRACTURES.

Dr. J. M. Barton said: I was obliged, during the last three months at the German Hospital, to examine an unusual number of fractures under an anæsthetic, as many of them were near the larger joints, and the character and extent of the bony lesion could not otherwise be appreciated. In the neighborhood of the ankle-joint alone, out of a large number examined, there were sixteen cases in which fractures were found. In many of these cases the line of fracture is quite transverse, running through one or both malleoli, but owing to the spasmodic contraction of the muscles the parts are held firmly in place, and without an anæsthetic it would be difficult to say that any bony lesion existed.

With ether many patients struggled so during the period of excitement that I often feared they might seriously complicate the existing injury. Indeed, the struggles of some of them were so threatening that I treated several cases without having administered an anæsthetic, preferring to take the risk of not fully knowing the extent of the injury rather than that a simple fracture should become compound while making the examination.

Early in March I obtained for the hospital, from S. S. White & Co., an apparatus consisting of an iron cylinder containing one hundred gallons of liquefied nitrous oxide gas, a gas-bag of seven and one-half gallons' capacity, and the necessary tubing, mouth-pieces, etc.

On March 6 the gas was administered to Marie B., æt. 26 years, servant-girl by occupation. She became fully unconscious without any struggling whatever. Fractures of the tibia and fibula were discovered, and their lines fully recognized and noted. The recovery from the gas was, of course, prompt.

March 16. Hugh C., æt. 53, laborer, a stout Irishman of probably bad habits, and whom I should have expected to struggle violently under ether. He took the gas quietly and without a struggle. I made a full and careful examination. Both the tibia and fibula were fractured. The line of fracture was fully recognized and noted.

March 21. M. S., æt. 22, baker. Had ingrowing toe-nails. Both sides of both great toes were removed under "nitrous oxide," Dr. Rehfuss, the resident physician, operating upon one toe and I upon the other. The patient stated that he had not felt a particle of pain.

March 23. Anton C., æt. 38, wagon-builder, was examined under "the gas." A comminuted fracture of the tibia was discovered, and the position, size, and obliquity of the pieces noted. In addition, a fracture of the fibula at the junction of the lower and middle thirds,

and another just below the head, were discovered.

March 27. Ellen S., æt. 42 years, servant, was examined under nitrous oxide, and a Pott's fracture found.

During this time, in private practice, I refractured a radius in the case of Miss L., using nitrous oxide as the anæsthetic. The patient was fully unconscious, and I had no more difficulty than if ether had been used.

I would call the attention of the Fellows mainly to the advantages of nitrous oxide in the examination of fractures. Its advantages in all minor operations, of course, are familiar. That it does not cause nausea or vomiting, even if the stomach be not empty, the slight risk, the immediate recovery, permitting the patient to attend at once to his usual vocations, etc., are well known; but in fractures we avoid that period of excitement which appears during the administration of ether, and during which the patient is so likely further to injure the fractured limb.

The period of full anæsthesia is from one to two minutes, but the period of total muscular relaxation is nearly four minutes.

While the anæsthetic is being administered the injured limb is fully exposed and held by the surgeon. Before the patient is quite unconscious the surgeon feels the limb become limp and lax in his hand; all the muscles are relaxed. The examination can now begin, though the patient gives some slight evidence of feeling pain. This period, the period of total unconsciousness, and the succeeding period of muscular relaxation, give about four minutes, which I have found to be abundant time to examine almost any fracture.

Nitrous oxide has been but little used in surgery, owing to the difficulties of keeping and transporting it; but the apparatus which I show you here, and which is furnished at a moderate price by the dental supply depots, overcomes these objections, and I am sure it will be found of service in many minor operations. I am well aware that some of the Fellows of the Academy have used this anæsthetic for a long time and have had great experience in its use; but I also know that very few, if any, of the hospitals use it, and it is not nearly so much used in surgery as it should be.

Adjourned.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, SEPTEMBER 24, 1885.

The President, E. O. SHAKESPEARE, M.D., in the chair.

DR. WILLIAM OSLER presented specimens of

TÆNIA ECHINOCOCCUS.

This rare parasite was reared experimentally by feeding a dog with hydatids from the liver of a pig. The animal was killed about seven weeks after the feeding, when the small intestine was found to contain many hundreds of the mature tape-worms. The portion of bowel exhibited had many adherent to the mucous membrane. From the small size of the worms, only a few lines in length, they are very apt to be overlooked. Cobbold states that the only specimens procured in England have been experimentally reared. Dr. Leidy has never met with the adult worm in this country. That it must occur here in the dog is very evident from the frequency with which echinococcus cysts (the larvæ) are met with in the hog and other animals.

CYSTICERCUS CELLULOSÆ.

Dr. OSLER exhibited the heart, brain, and a portion of the flesh of a pig containing the "measles," as the larvæ of the tænia solium are called. Both organs were thickly studded with the cysts, which are also very numerous throughout the muscular system. The animal was fat, and had seemed to suffer very little inconvenience. Attention was called to the cysts beneath the tongue, and to the possibility of telling whether an animal was measled by an examination of this part during life. Microscopic slides of the parasites were shown, and a slide of a cystocercus, with a very large caudal vesicle, from the omentum, in which situation they may grow to the size of a walnut.

DISTOMA HEPATICUM: EFFECTS ON THE LIVER.

Dr. OSLER also showed the liver of an ox, with enormous enlargement of the bile-vessels and calcification of their walls due to the chronic inflammation excited by the presence of the flukes. The main ducts were thicker than the thumb, and even the smaller tubes were hard as the stem of a clay pipe. The liver-substance was wasted, but not cirrhotic. In spite of this extensive disease, the animal was well nourished. Specimens of the flukes in spirit and mounted were also shown.

Dr. WILLIAM PEPPER presented before the Society the specimens of

TÆNIA FLAVO-PUNCTATA

described by Prof. Leidy in the *American Journal of the Medical Sciences* for July, 1884. This species has never but once before been seen and recognized, and then by Weinland, of Boston, in 1858. Both specimens were expelled from young children, and averaged twelve inches in length.

Dr. PEPPER also presented the head and neck of a specimen of

TÆNIA MEDIO-CANELLATA.

It occurred in a young man. A course of starving followed by castor oil and pelletiérine removed a portion of the worm; afterwards a repetition of the starving process, without the castor oil, but with the alkaloid, brought away the entire worm dead.

Dr. Pepper said he was particularly interested in this series: it spoke forcibly of the necessity of studying comparative pathology. The specimens were very perfect, and more instructive than more highly organized species. In practice, he had found the tænia mediocanellata as difficult to expel as the tænia solium. The exhibition of the small variety, the flavo-punctata, taught the necessity of careful examination of the stools.

Dr. De Schweinitz exhibited the kidneys, ureters, and bladder from a man who died after the operation of

LITHOLAPAXY.

The patient, æt. 73, had for two years previous to the operation suffered with straining during the act of micturition, and other symptoms of hypertrophy of the prostate gland and vesical calculus. The urine contained albumen, pus, epithelium, and granular casts, and had a sp. gr. of 1.018. The patient's habits were intemperate. The operation of litholapaxy was performed, marked difficulty having been experienced in the introduction of the instruments.

After the operation the patient exhibited great restlessness, præcordial pain, and a rapid, feeble pulse. Later he became comatose, and died twenty hours after the operation, the immediate cause of death being apparently the formation of a heart-clot.

The post-mortem examination was made about ten hours after death:

Body well made; nothing of note anteriorly; the usual ecchymoses posteriorly.

Thorax.—Old pleuritic adhesions on the right side; left side free. Lungs crepitant, with slight posterior congestion. Heart surrounded with fat; muscular fibres flabby; valves normal; firm "chicken-fat" clot with right ventricle.

Abdomen.— Position of viscera usual. Marked deposits of fat in the omentum. Liver slightly enlarged, soft, but otherwise normal. Both kidneys granular and containing cysts. Bladder thickened, and showing two spots of ecchymosis on the mucous surface. Prostate enlarged; other organs normal. Brain and membranes not examined.

DISCUSSION.

Dr. Tyson thought this case added one more to the list showing the impropriety of crushing for stone when kidney-disease was present. He did not know why, but under such circumstances the cutting-operation was more suitable. Dr. Tyson cited the case of Louis Napoleon as an instance of the danger of crushing in the presence of kidney-disease. Dr. Tyson said, in answer to a question of Dr. Barton's regarding the kidneys, that they were contracted, though not markedly so, as there was good secreting structure left. The cysts were part of the pathological anatomy of granular kidney. He believed the cause of death to be uræmia.

Dr. G. G. Davis said that in such cases a post-mortem examination was in reality of the nature of an investigation. Death might be due to direct violence done the urethra, the prostate, or the bladder; or it might be due to extension of inflammation to the peritoneum, or to unknown cause, as in the present case.

Dr. De Schweinitz said that the urethra was not examined, and agreed with Dr. Tyson that the cause of death was uræmia. This was the more probable because an officious attendant, against orders, had administered rather full doses of morphia.

Dr. Henry Beates presented a specimen of

SYPHILITIC ABSCESS AND NECROSIS OF THE TIBIA REMOVED BY AMPUTATION AT THE MIDDLE OF THE THIGH.

The patient was a strumous man, who, three years previously, had suffered from an attack of obstinate sciatica, accompanied by a marked degree of muscular atrophy of the affected limb, followed by lameness. Two years later a swelling developed at the femoral side of the gluteo-femoral crease, which opened and discharged small fragments of necrosed bone. The sinus was finally healed, and fair health enjoyed for several months. Seventeen weeks ago osteitis of the tibial head developed, followed in a short time by suppurative synovitis. The pus perforated the ligamentum posticum and burrowed beneath the gastrocnemius, elevating it and the posterior tibial muscular structures from the bone. Free incision evacuated this, but the destructive process continued, resulting in the formation of sinuses and complete disintegration of the joint. Hectic was pronounced, and to save life amputation was performed on the day previous.

Longitudinal section through the femur-joint and tibia discloses the extensive destruction effected in so comparatively short a time. The articulating surface of the condyles is denuded of its cartilage, and the surface of the bone is roughened. The patella is bound firmly to the trochlear portion of the condyles. The articular elements are destroyed. The head of the tibia is completely necrosed and broken down. The medullary canal of the tibia throughout its entire extent is infiltrated with pus. The surface of the bone is also the seat of the morbid process. The pus from the joint has burrowed upward beneath the internal and external vasti muscles, and deprived the femur of its periosteum for a considerable distance. The anterior face of the tibia is similarly denuded, while the crest at the middle is the seat of ulceration. At the time the disease occurred, the patient first noticed a chancre. Six weeks later the secondary phenomena developed, and were

promptly met with antisyphilitic remedies. Was the strumous disease influenced by the syphilis?

The specimen was referred to the Committee on Morbid Growths for microscopical examination, with instructions to look for tubercle-bacilli and for those said to be peculiar to syphilis.

DISCUSSION.

Dr. DAVIS was desirous of knowing if the disease of the head of the tibia was due to scrofula or syphilis: the worm-eaten character of the ulcer on the tibia looked like syphilis.

Dr. CHARLES M. WILSON inquired if there had been fevers, rigors, and evidences of pyæmia in this case. It was undoubtedly one of osteomyelitis, and in a similar case of traumatic origin which he had exhibited rigors had been present.

Dr. JURIST asked how the presence of acute syphilis in the patient would affect the prognosis of the operation.

Dr. BEATES replied that there had been symptoms of septic fever, and, as the acute symptoms of syphilis had been absent for some weeks, he did not think this would mar the prognosis.

DEATH FROM ŒDEMA OF THE GLOTTIS.

Dr. LOUIS JURIST presented the larynx and trachea removed post mortem from the body of a man, æt. 38, a book-keeper, who had suddenly died. He had not had syphilis. He had taken cold on Saturday and had a sore throat; on Tuesday he chatted with the doctor, and an examination gave no evidence of anything except ordinary pharyngitis; on Wednesday he went to his business; on the evening of that day the doctor was sent for in haste, and, on going at once, found the man dead. Nevertheless, a hurried laryngotomy was done and efforts were made to restore the heart, but without avail.

Dr. Jurist removed the larynx through the thoracic cavity. He was in doubt as to the mode of death. The lungs were fairly healthy, though cheesy on one side. There must have been an abscess present.

Dr. TYSON was surprised that marked improvement should have followed the treatment by emetics and sedatives, as the abscess must have been present: perhaps the outlying œdema was subdued and the condition thus improved.

Dr. WHARTON had not had experience in such cases, but agreed with Dr. Jurist that the operation of tracheotomy, and not laryngotomy, was indicated.

Dr. JURIST was in doubt in regard to the diagnosis: it rested between perichondritis and a subsequent abscess or phlegmonous laryngitis. He was inclined to the former view.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held October 14, 1885. GEORGE F. SHRADY, M.D., President *pro tem.*, in the chair.

MELANO-SARCOMA OF THE FACE.

Dr. JOHN A. WYETH presented a woman, aged 70 years, who had noticed a little tumor upon the left side of the face several years ago. It finally began slowly to enlarge, and four years ago was treated by an escharotic of some form, which left a scar and depression. Recently Dr. Fox saw the patient, made a diagnosis of melano-sarcoma, and sent the patient to Dr. Wyeth for operation. The incision extended from upon the nose an inch and a half outward upon the cheek, and a quarter of an inch below the palpebral border. The gap was filled in by integument drawn over the malar bone. Union took place by first intention and showed a very good result; there was no ectropion. The operation had been done two weeks ago. The points of interest were, the comparative rarity of the disease, and the fact that it illustrates the great vitality of the tissues of the face, and the ease with which one could fill up gaps by a carefully-performed plastic operation.

CAST OF THE BLADDER.

Dr. H. J. BOLDT presented a cast of the bladder, which was obtained in the case of a woman 18 years of age who had recently been confined with her first child. Labor was normal, but soon afterwards she felt pain in the hypogastric and lumbar regions, and examination showed albumen, blood, and a small quantity of pus in the urine. The temperature was 102.6°. The diagnosis of catarrhal nephritis was made. One day while urinating the patient felt an obstruction in the urethra, and on making examination subsequently Dr. Boldt felt a membrane at the urethra which he believed to be partial inversion of the bladder, and replaced the presenting part. It again protruded on several occasions, and Dr. Lusk saw the patient in consultation, and likewise expressed the opinion that there was a tendency to inversion of the bladder. The presenting sac became somewhat putrid, and was sprinkled with iodoform. It was finally discharged, and Dr. Boldt expressed the opinion that it was composed of mucous membrane, submucous tissue, and perhaps some of the muscular fibres of the vesical wall. There seemed to be complete denudation of the bladder, and its walls afterwards became thickened, and contracted upon the cavity. The temperature rose, and soon after the expulsion of the membrane the patient died with cerebral symptoms, thought to be of septic origin. An autopsy could not be obtained. Death took place about twenty

days after confinement. Dr. Boldt said such cases were extremely rare; but few had been recorded in Europe, and he believed none in this country. The patients invariably died.

Dr. CARPENTER thought a case of cast of the bladder had been reported to this Society, and also to the New York Obstetrical Society.

Dr. PRUDDEN expressed doubt as to whether the specimen was the mucous membrane of the bladder and not a new formation.

LARGE SARCOMA OF THE OVARY.

Dr. CUSHIER presented a very large sarcomatous tumor removed from the abdominal cavity, attached to the uterus, but probably having its origin in the left ovary. It had grown rapidly, and had greatly reduced the patient's strength. Dr. Hunter saw the patient in consultation, and an exploratory incision was made; but the nature of the growth and its adhesions deterred them from removing it. The patient died five days later of exhaustion and disappointment in not having the growth removed. The retroperitoneal glands were enlarged, and there were some nodules in the lungs. The great rarity of sarcoma originating in the uterus, pointed out by Leopold, led her to believe this one began in the ovary, although the microscopical examination failed to decide this question conclusively. The growth was composed of round and spindle cells.

DERMOID CYST OF THE OVARY.

Dr. CUSHIER also presented a dermoid cyst of the ovary removed on Thursday last. The tumor had grown rather rapidly. Its attachments were numerous, but not firm, and it was removed without difficulty. The hair was limited to a small pouch in the larger sac, the greater cavity containing chiefly sebaceous matter.

DEATH FROM CONGENITAL CYANOSIS.

Dr. L. E. HOLT presented the heart, lungs, and kidneys removed from the body of a child which died forty-eight hours after birth. It weighed between four and four and a half pounds, was cyanotic at birth, breathed very rapidly, the pulse could not be counted. It died quietly. The lungs sank in water, were firm; it was scarcely possible to find any distended air-cells with the unaided eye. The foramen ovale was sufficiently large to admit the tips of two fingers; the valves were not abnormal. The spleen was twice its normal size, hard, and congested. The kidneys showed interstitial inflammation and uric acid infarctions. There was a decidedly syphilitic history, and it was a question whether this disease may not have been connected with the abnormalities mentioned.

The Society adjourned.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held October 15, 1885, A. JACOBI, M.D., President, in the chair.

THE COMPARATIVE RESULTS OF SURGICAL OPERATIONS IN BELLEVUE HOSPITAL.

STEPHEN SMITH, M.D., the author of the paper, thought there was no better place in which to test the progress of practical and operative surgery than in the wards of Bellevue Hospital. This institution had within its walls and environments all the conditions which would now be regarded as unsanitary. Although many changes had been made within the interior, the serious defects of locality and construction still remain unaltered. During nearly the entire thirty-five years during which Bellevue had been a surgical hospital Dr. Smith had been personally familiar with the practice in the several surgical divisions. The practice of surgery had within the period mentioned undergone so complete a revolution that one of the older surgeons would scarcely realize that he was in the same hospital where he had practised a few decades ago. At that time, before the introduction of anæsthetics, the chief principle which actuated him in his operations was celerity; but now, while the surgeon desires to render the period of anæsthesia as short as practicable, mere celerity was mentioned only to be condemned.

The author then contrasted the several details of former surgical procedure with the practice of to-day. Before the use of antiseptics, little thought was given to securing cleanliness. The surgeon placed his cutting-instrument (when not in use) wherever it was most convenient; the ligatures were carried in his pocket; the accumulated secretions of the skin and other filth were allowed to remain on the limb even during major operations. In his personal preparations the surgeon sought only to avoid soiling his clothes; the bystander was asked to examine wounds with unwashed hands; the sponges were carriers of filth, and were only washed in simple water; one end of the ligature only was removed, the other being left to make traction upon when final separation from the vessel should take place; suppuration was expected, and the wound was left open at the most dependent portion to allow of the escape of pus; adhesive plaster was applied which had not been rendered aseptic, and the stump was wrapped in unbleached muslin which had not been specially cleansed.

The methods in use at the present time were then placed in contrast with those of the past. The surgeon formerly prepared the wound for suppuration, while he now dressed it for union without suppuration. Both uniformly realized their expectation. As a result of former methods, the surgeon

had pus, fever, septicæmia, perhaps pyæmia, exhaustion of the patient; and in major operations, as larger amputations, etc., death often ensued.

The dictum of Hunter, that compound fractures commonly suppurate, was formerly the guiding principle, but to-day compound fractures were welcomed to the wards of the hospital as a class of cases which gave most satisfactory results. Amputation was not thought of except where arteries and nerves were so destroyed as to prevent nutrition. The treatment now pursued in compound fractures is designed, first, to remove from the wound every particle of matter liable to injure the tissues and induce suppuration; second, to place in fixed apposition the various tissues involved in the wound; third, to cleanse and disinfect the wound and protect it from becoming soiled during recovery; fourth, to protect the wound from any movement of the parts entering into it while the process of repair is going on.

Formerly, the excision of large joints was a most dangerous operation; but now these wounds, as a rule, healed by rapid and healthy granulation. Perhaps the most marked illustration of the great improvement in operative surgery in Bellevue Hospital might be found in the unvarying success which now attended the treatment of simple fracture of the patella by wiring together the fragments.

Septicæmia and pyæmia are now seldom seen in the pavilions devoted to gynæcology. Since November, 1883, Dr. Wylie had performed laparotomy thirty times, with five deaths. Of the cases proving fatal, two were hysterectomies, one for cancer of the uterus, and the other two for myomata weighing fifty pounds.

Cleanliness was the one great object sought to be obtained in all operations. The conditions regarded as essential to success might be summarized as follows: a clean operator, clean assistants, a clean patient, clean instruments, clean dressings.

Dr. A. C. Post was prepared to accept the statements of the author regarding the efficiency of thorough cleanliness of wounds. He thought, however, that there is still some doubt as to how far antiseptics, so called, contributed to the success of operations. But thorough cleanliness is, without doubt, a very important matter in the treatment, and seclusion of the wound from external malign influences is also a very important item. His reason for doubting somewhat the part played by antiseptics in the treatment of wounds was founded upon the experience of the most eminent gynæcologists of Great Britain, Mr. Tait and Mr. Keith, who regarded antiseptics as not only useless, but as pernicious,—claiming, indeed, that they add slightly to the mortality. But, at the same time, they both insist very strongly upon entire cleanliness. There can be no doubt as to the great improvement which has taken place in the treatment of surgical wounds, whether that improvement is to be referred to the antiseptic methods directly or to cleanliness.

Dr. W. G. Wylie did not know whether we should have ever known the full value of cleanliness had it not been for the introduction of antiseptics. Antiseptics had done a great deal of good; but, like all other good things, they had been carried too far, and there was now somewhat of a reaction against them. If the methods of Tait and Keith are studied, it will be seen that if they do not use antiseptics it is because they secure such complete cleanliness that antiseptics are not necessary. If he could feel perfectly satisfied that he could always secure entire cleanliness, he might give up the use of antiseptics.

Dr. F. V. White asked Dr. Smith what had been his results from the use of the wire in fracture of the patella; whether or not he had gained bony union.

Dr. W. M. Carpenter had been for many years an observer of the treatment of surgical wounds in the Bellevue Hospital, and had been able to trace the results in the fatal cases as they appeared at autopsy. Formerly, before the adoption of antiseptics and cleanliness, surgical kidney, etc., was not of infrequent occurrence; but it had now become a thing of the past. The so-called surgical kidney was no more to be seen in the dead-house.

Dr. Smith, in closing the discussion, said he had not intended to dwell specially on the subject of antiseptics, but he might say that his own opinion was that extreme cleanliness had secured the present excellent results in surgical practice in Bellevue Hospital. Antiseptics, he thought, have simply brought us to a knowledge of the necessity of cleanliness; they are adjuvants to cleanliness. But those surgeons who ridicule antiseptic methods are doing harm, for not every one who follows their advice in discontinuing the use of antiseptics would be able to secure the degree of cleanliness which they obtained by other means. Besides, they do make use of carbolic acid, etc., in cleansing sponges and preparing for the operation.

In answer to Dr. White's question, he said that he had wired the fractured patella seven times, and had obtained what appeared to be bony union; but whether it was so or not he could not positively say.

The Pathological Society of Philadelphia, at its semi-annual meeting held on the 22d instant, was addressed by Dr. J. Collins Warren, of Boston, whose theme was "A Comparison of the Changes in Arteries after Ligature and in the Ductus Arteriosus after Birth." Later in the evening a reception was tendered to Dr. Warren at the St. George Hotel. A lunch was also given to Dr. Warren by Dr. J. C. Wilson.

NEW BOOKS.

A Practical Treatise on the Diseases of Children. By Alfred Vogel, M.D. Translated and edited by N. Raphael, M.D. Third American from the Eighth German Edition, Revised and Enlarged. Illustrated by Six Lithographic Plates. New York, D. Appleton & Co. 1885. Pp. 637.

The Science and Art of Midwifery. By William Thompson Lusk, A M., M.D., etc. New Edition, Revised and Enlarged. With numerous Illustrations. New York, D. Appleton & Co. 1885. Cloth, 8vo. Pp. 763.

Alpine Winter in its Medical Aspects. With Notes on Davos Platz, Wiesen, St. Moritz, and the Maloja. By A. Tucker Wise, M.D., etc. Second Edition. London, J. & A. Churchill. 1885. Pp. 121.

The Physician Himself, and what He should Add to his Scientific Acquirements in Order to Secure Success. By D. W. Cathell, M.D. Fifth Edition, Thoroughly Revised. Baltimore, Cushings & Bailey. 1885. Pp. 284.

Practical Surgery: Including Surgical Dressings, Bandaging, Fractures, Dislocations, Ligature of Arteries, Amputations, and Excisions of Bones and Joints. By J. Ewing Mears, M.D., etc. With Four Hundred and Ninety Illustrations. Philadelphia, P. Blakiston, Son & Co. 1885. Cloth, 12mo. Pp. 794.

A Doctor's Experiences in Three Continents. By Edward Warren, M.D., C.M., LL.D., Bey by Khedival Firman, etc. In a Series of Letters addressed to John Morris, M.D., of Baltimore, Maryland. Baltimore, Cushings & Bailey. 1885. Pp. 613.

Applied Medical Chemistry. A Manual for Students and Practitioners of Medicine. By Laurence Wolff, M.D., etc. Philadelphia, P. Blakiston, Son & Co. 1885. Cloth, 8vo. Pp. 174.

Milk-Analysis and Infant-Feeding. A Practical Treatise on the Examination of Human and Cow's Milk, Cream, Condensed Milk, etc.; and Directions as to the Diet of Young Infants. By Arthur V. Meigs, M.D. Philadelphia, P. Blakiston, Son & Co. 1885. Cloth, 12mo. Pp. 102.

Post-Mortem Examinations, with Especial Reference to Medico-Legal Practice. By Professor Rudolph Virchow, of the Berlin Charité Hospital. Translated by F. P. Smith, M.D., etc. With Additional Notes and New Plates. From the Fourth German Edition. Philadelphia, P. Blakiston, Son & Co. 1885. Cloth, 12mo. Pp. 138.

Epitome of Diseases of the Skin. Being an Abstract of a Course of Lectures delivered in the University of Pennsylvania during the Session of 1883 and 1884 by Louis A. Duhring, M.D. Reported by Henry Wile, M.D. Philadelphia, J. B. Lippincott Company. 1886.

NEW REMEDIES AND CLINICAL NOTES.

Carbolic Acid in the Treatment of Malignant Pustule.—A case is reported by Dr. Buck of a veterinary surgeon, 31 years of age, who had the characteristic lesion of malignant pustule appearing upon the back of the right wrist exactly twelve days after examining an animal which had died with anthrax. The patient, on the third day after the blister was noticed, had a temperature of 104°; he had rigors and a coated tongue. Pure carbolic acid was injected under the livid spot, large and frequent doses of sodium hyposulphite were ordered, and the patient put on a meat diet. Four days later, carbolic acid was again injected. The patient rapidly recovered, but the eschar did not finally separate for nearly six weeks; the ulcer then soon healed. The result was attributed to the injection of the pure carbolic acid, which did not seem to be painful.—*British Medical Journal.*

Chloride of Calcium.—Dr. R. W. Creighton (in *The Practitioner* for September) says a good word for a remedy that has experienced great vicissitudes of fortune. In scrofulous manifestations, with or without attendant suppuration, this salt of lime he found to produce admirable results. The effects of lime salts upon the heart, in increasing its force, have been established by Sydney Ringer's experiments, and were observed clinically by Dr. Creighton. The crystallized chloride of calcium is given in doses of one, two, or three grains for young children, and rarely more than twelve or fifteen for adults. Coghill's formula of five ounces of the crystallized salt in twelve fluidounces of syrup is the preferred form of administration, in doses of five to sixty minims, according to age. It is usually given in milk after meals.

Quinine for Hypodermic Injections.—Dr. L. Aitken advocates the hypodermic administration of quinine in acute intermittent fever, preferring the hydrochlorate and bisulphate, the latter being the cheaper. A mixture is made of pure glycerin and distilled water, of which six minims at the temperature of the body would readily dissolve one grain of the salt. To this two per cent. of carbolic acid is added. Thirty minims of this solution, containing five grains of the bisulphate, may be injected into the subcutaneous cellular tissue, and repeated if deemed necessary.—*British Medical Journal,* October 10.

Nitrite of Sodium in Gout-Epilepsy.—

℞ Sodii nitritis, gr. xxxvj;
Sodii hippuratis, ʒiij;
Inf. serpentariæ, q. s. ad fʒxij. M.

One ounce to be taken before meals, three times a day. The sodium nitrite should be carefully increased until it reaches fifteen grains, although some cases yield to ten grains. In case there is constipation and jaundice the following may be used:

℞ Iridin, gr. ij;
Ext. cascaræ sag., gr. iij. M.
Ft. pil.

To be taken at night, and repeated each night until the symptoms are overcome.—J. M. Granville, *Brit. Med. Journ.*, p. 700.

Nitrite of Amyl in Gout.—One of the effects of inhalations of nitrite of amyl in health is to increase the quantity of urine and its contained uric acid. Dr. A. D. Macdonald, of Liverpool, having tried to utilize this property in the treatment of a paroxysm of

gout, found that it had the same effect upon the excretion of uric acid, and gave speedy relief. It was given in the usual doses (℥iv to v) by inhalation, repeated several times, at intervals of two hours. It is suggested that it may be also employed as a prophylactic when an attack is threatened.

MISCELLANY.

A Post-Mortem in Public.—A valued correspondent sends a clipping from the *Providence Journal* of October 18, 1885, concerning a post-mortem held in a public cemetery in Newport the day before:

"The remains were taken from the coffin and placed upon the lid of the outside box, which was used as a dissecting-board. A search was first made for the ball which was fired into the breast. The ball penetrated the skin three inches inside of the left nipple, going through the left ventricle, passing the eighth and ninth ribs about three inches from the spine, where it was lost. The heart and liver were removed from the body, and the greater part of the intestines also, by which action the physicians were enabled to reach the conclusion as to what effect his shot would have. For over an hour a search was made for the ball, but after a large quantity of the flesh had by a process of chopping been reduced as small as mince-meat the effort to discover its whereabouts was given up, and attention was given to the wound in the head. The hole in the scalp is some two inches from the top of the right ear. The scalp was thrown back and sawing was commenced. The brain was very large indeed. Considerable dissecting had to be performed, and finally the bullet was found in the posterior portion of the cerebrum of the left side. Almost immediately Dr. —— exclaimed, 'That proves that it did not wound the cerebellum.' The finding of the ball in the head was a matter of much satisfaction, of course. The remains were then put together in the coffin and reinterred."

He adds some vigorous comments, which express the sentiment of a number of the medical profession upon this extraordinary occurrence:

"The cemetery is very accessible, and it is exceedingly fortunate that comparatively few knew of the intended operation. The poor man was supposed to have committed suicide, but, some doubt having arisen, and ugly rumors having gained some circulation, the post-mortem was ordered, with all the disgusting details already quoted. In the first place, the subject was a colored man; but certainly his poor family were entitled to as much consideration as any white people. It is no legitimate excuse to urge that he was simply a nigger! What interests the community most is the fact that under the same officers such scenes can be and perhaps may be repeated.

"To remove a body from its grave and coffin, and use the outside coffin for a dissecting-table, and then calmly, in the sight of the populace, to 'chop the body into mince-meat,' is a spectacle so disgusting and an operation so beneath the dignity of professional gentlemen that words fail sufficiently to condemn the act!

"In a large experience, I have never known of such an outrage upon both dead and living, and such a prostitution of professional power. Those concerned in it have certainly disgraced themselves by being present, and the sooner they realize this fact the better for all concerned.

"Unquestionably we need a dead-house or morgue, but until one is provided let the dead be respected by decent treatment under suitable shelter, and in some retired place away from the eyes of those who have no right to see.

"Such proceedings debase the witnesses, and as illustrations of barbarism rank with the deeds of vigilance committees or the public hangings of frontier towns."

Oleomargarine and Butter Substitutes.—The recent suits in the courts against the stringent laws prohibiting making or selling oleomargarine have been generally successful in establishing the proposition that the manufacture of imitation butter is not in itself wrongful and cannot be absolutely prohibited. This at least is the purport of the recent decision in the New York Court of Appeals. In this State (Pennsylvania) a test-suit is pending, with every probability of a corresponding result being obtained. It appears, therefore, that the only province of the legislative bodies is to enact as stringent laws as they deem proper to prevent the manufacture or sale of oleomargarine under the guise of genuine butter.

There is now another decision in a New York court of considerable interest on the general subject of adulteration.

The statute says that milk to be salable must not contain more than eighty-eight per cent. of water or liquids, and a violation of this provision was the subject of a recent prosecution. In defence the milkman claimed that, while the milk was not of the proper standard, it was just as it came from the cow, and offered to prove this statement. He was not allowed to do so, and a conviction resulted. An appeal having been taken from this verdict, the conviction was reversed, on the ground that the Constitution forbade the Legislature from taking away private property without just compensation, and this would be the practical result of the conviction.

The case was reopened, and the milkman will have an opportunity of proving his statement if he can.

Anti-Vaccination Excitement in England.—The furor against vaccination in some

parts of England is hardly intelligible in this country, where the opposition has been comparatively slight. The agitation is ostensibly directed towards compulsory vaccination, which the law gives the health-officers power to require, but practically shows an entire disbelief in the efficacy of vaccination in any case. This is shown by the fact that Dr. Jenner was recently hung in effigy in one of the large towns in central England, while a horse and cow were exhibited in wagons to bring ridicule upon the source of the great physician's remedy. A coffin on an open bier symbolized the results of the discovery. The fact that occasionally serious harm has resulted from impure vaccine matter has been taken advantage of by the opponents of the system, and it has had great effect upon the ignorant masses.

The vast accumulation of statistics showing the beneficent results of vaccination have been published again and again, but without having much apparent influence upon the agitation.

Responsibility for Damage done by Sewage.—A recent English decision enforces the health-laws by requiring a person to take proper care of the sewage from his house. It appeared that it percolated through the ground and entered the well of a neighbor, rendering it unfit for use. Under these circumstances, it was held that the plaintiff was entitled to an injunction forbidding the discharge of the offensive matter in the way it had been.

Death of Prof. McSherry, of Baltimore.—A special meeting of the Medical and Chirurgical Faculty of Maryland was held October 10, to take action upon the death of the late Prof. Richard McSherry, M.D., whose loss is universally felt in the city where he had practised medicine since 1851. At the time of his death he was Professor of Theory and Practice of Medicine in the University of Maryland, and President of the State Board of Health.

Dr. Benjamin Lee has removed his offices and Hall for Remedial Exercise and Massage to No. 313 South Fifteenth Street. He continues to reside on Manheim Street, opposite McKean Avenue, Germantown.

The Ninth Annual Meeting of the American Academy of Medicine was held at the New York Academy of Medicine, 12 West Thirty-first Street, New York, on Wednesday and Thursday, October 28 and 29, 1885. A report of the proceedings will appear in our next issue.

"Colden's Liquid Beef Tonic," according to Dr. Benjamin H. Briggs, Selma, Alabama, is an excellent preparation of known composition, and it is one that physicians can intelligently prescribe. He has found it of great service in his practice.

Dr. A. Van Harlingen has removed his office to No. 118 South Seventeenth Street.

Dr. T. H. Bradford has removed to No. 125 South Eighteenth Street.

Dr. W. H. Parrish has removed to 1435 Spruce Street.

NOTES AND QUERIES.

A CORRECTION.

Dr. Stanley Sutton writes that in the report of the discussion of the proceedings of the American Gynæcological Association he did not make the remark credited to him on page 26, and that, in fact, his sentiments are really in accord with those of Dr. Chadwick, and not opposed, as was stated. Our apologies are due to Dr. Sutton for the mistake; and we regret that our report credited him with a remark made by another.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 11, 1885, *TO OCTOBER* 24, 1885.

Colonel T. A. McParlin, Surgeon.—Directed to await further orders in New York City. Letter from A. G. O., October 19, 1885.

Lieutenant-Colonel E. P. Vollum, Surgeon.—Assigned to duty as Attending Surgeon, Headquarters Department of the Platte, Omaha, Nebraska, relieving Assistant-Surgeon William C. Shannon. S.O. 103, Department of the Platte, October 15, 1885.

Lieutenant-Colonel B. J. D. Irwin, Assistant Medical Purveyor.—Ordered from Department of Arizona to New York City, for temporary duty in charge of Medical Purveying Department at that place, relieving Captain Henry Johnson, Medical Storekeeper. S. O. 233, A. G. O., October 10, 1885.

Major Anthony Heger, Surgeon.—Directed, in addition to his present duties as member of Army Medical Examining Board now in session in New York City, to perform the duties of Attending Surgeon in that city. S. O. 240, A. G. O., October 19, 1885.

Major Joseph C. Baily, Surgeon.—Granted leave of absence for twenty days. S. O. 225, Department of the East, October 19, 1885.

First-Lieutenant Edward R. Morris, Assistant-Surgeon (recently appointed).—Ordered for duty in Department of Missouri. S. O. 233, A. G. O., October 10, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM OCTOBER 11, 1885, *TO OCTOBER* 17, 1885.

Passed Assistant-Surgeon J. B. Baldwin.—Detached from Naval Hospital, Philadelphia, and ordered to Navy-Yard, Mare Island.

Surgeon D. Dickinson.—Detached from Naval Hospital, Mare Island, and ordered to Training-Ship "Portsmouth," as relief to Surgeon A. M. Moore.

Surgeon A. M. Moore.—Detached from Training-Ship "Portsmouth," and wait orders.

Assistant-Surgeon Joseph Shafer.—Detached from Receiving-Ship "St. Louis," and ordered to Naval Hospital, Philadelphia, as relief of P. A. Surgeon Baldwin.

Assistant-Surgeon F. A. Hester.—Detached from U.S.S. "Minnesota," and ordered to the "Tennessee," as relief of P. A. Surgeon Nelson H. Drake.

Passed Assistant-Surgeon Nelson H. Drake.—Detached from the "Tennessee" 31st instant, and wait orders.

PHILADELPHIA, NOVEMBER 14, 1885.

ORIGINAL LECTURES.

ON CASES OF SKIN-DISEASE.

Delivered at the New York Hospital

BY L. DUNCAN BULKLEY, M.D.

DIFFUSED PAPULAR SYPHILIDE.

GENTLEMEN,—This is a case of diffuse lenticular papular syphilide, which is now fading away. Last week each one of these papules was encircled by a roseolous spot. Nothing remains now but staining. On making pressure on these spots you will perceive that they are due to pigmentation. If they were vascular, the spots would disappear on pressure; these, as you see, do not. The eruption is confined chiefly to the flexor surfaces and to the trunk. The skin-disease made its appearance after the patient had a chancre; but it would not be likely to be mistaken for any other disease. If it were eczema there would be more inflammatory action, and the disease would exist in patches. Psoriasis would not exist to such an extent on the flexor surfaces without also involving the extensors. I wished to show you the pigmentary syphilide, and also the diffused macules around each papule.

SYPHILIS PALMARIS.

I showed you this case of palmar syphilis with eczema at my last lecture. I then called your attention to the chief diagnostic points in connection with the disease,—viz., that the eruption was mainly made up of papules arranged in double rings, with a wavy outline and well-defined margin. He has been under the mixed treatment of bichloride of mercury and iodide of potassium, and locally the glycerole of the subacetate of lead and glycerin, each twenty grammes in one hundred and twenty-eight grammes of water.

GENERAL SYPHILIS, WITH PALMAR LESION.

In speaking of the case of palmar syphilis just shown, I told you two weeks ago that the early syphilides when appearing on the hands generally affected both sides symmetrically. This case I now show you is only of early syphilis: it is about two years since the chancre was first noticed. You will notice that the eruption is made up of separate isolated papules, but which have a tendency to exist in groups of a circular outline. They are erythematous and hard, but there is no thickening, and not much scaling. A papular syphilide also exists on the knees and legs. We sometimes see an erythema resembling this eruption somewhat, but the arrangement is not similar. In ninety-nine out of every hundred cases of skin-disease of the palm we may suspect syphilis. The patient is at present under the mixed treatment.

PSORIASIS PALMARIS.

Two weeks ago I showed you an eruption existing on the hand, in which it was somewhat difficult to make a diagnosis between eczema and syphilis. To-day I show you this case of general psoriasis together with palmar psoriasis, which I said when speaking of syphilis of the palm, at the last lecture, was a rare lesion. The patient is 37 years of age, and he has had psoriasis nine years. It is generally diffused over the body; the flexor surfaces are, however, spared even where there is a great amount of the disease in the neighborhood. On the back and arms the eruption is guttate and nummular; in the latter situation it is also confluent. The skin of the penis and the glans penis are also affected. On examining the hands we find separate scattered spots, with no tendency to run together, spreading peripherally, and healing in the centre; no fissures are to be found, and on removing the scales from a papule, a reddened bleeding surface is exposed. The head, neck, and face are also covered with a similar eruption. The tongue does not present any scales, even with so large an amount of eruption elsewhere. I do not believe in the existence of a psoriasis linguæ, and consider the white patches which are sometimes seen on the tongue nothing more than a degeneration of the epithelium, being some form of commencing epithelioma.

PSORIASIS DIFFUSA.

D. K., a German, 55 years of age, has had the present eruption over ten years, which commenced on the head, affecting the knees, back, and lately the elbows. He is the father of four children, three of whom are healthy, the other has hip-disease. The patient had a chancre when he was young, but it was not followed by an eruption. He also had acute rheuma-

tism, but with these exceptions has always enjoyed good health. When the patient presented himself to me he showed me an eruption existing to a slight extent on the elbows, and to one not familiar with the disease it would be difficult to make a diagnosis from so small an amount of disease. On examining him carefully I found small, scattered scaly spots existing on the extensor surfaces of both arms. They were of a pearly-white color, and when removed the limiting membrane was shown, and beneath the reddened and bleeding corium. On the back is seen a more or less circular eruption, existing in scattered spots. The thighs are also affected, but to a limited extent. On examining the scalp an eruption is found, but, on account of the frequent washing, nothing characteristic can be seen.

This case shows the necessity of examining carefully all parts of the body before making a diagnosis, because if you do not you will often make mistakes as to the nature of the disease.

EPIDERMIC FAVUS.

The next case is one of epidermic favus. The patient is 10 years old, and gives no history of contagion. The eruption consists, as you see, of a patch of diseased skin, nearly circular, and about two inches in diameter, situated over the left malar bone and extending down on the cheek. It is circular like ringworm, and yellow masses are seen which, when removed, leave cup-like depressions. At first glance one not accustomed to see skin-diseases would not suppose it was favus, but would think it was either ringworm or erythematous eczema. In tinea circinata there would not be these cup-like masses and yellowish, sulphur-like color, nor the peculiar odor, and if it were a case of eczema there would be a history of moisture. The commonest mode of contagion is from cats: the cats get it from mice; and it is transmitted to human beings by the cats, although it occurs less frequently in cats than in mice.

FAVUS OF THE SCALP.

In this girl there is the same eruption, occupying a vast surface, with cups around the hair, with a peculiar odor. These distinct masses are not inflammatory, but are simply dry sulphur-like crusts which readily crumble into a fine powder, in which the spores of the *Achorion Schönleinii* are found. It is very contagious. The cups are the diagnostic mark; but, if we do not find these cups, upon examining the crusts we shall find the parasite (Achorion Schönleinii). The patient is 12 years of age, and has had the disease since she was cutting her eye-teeth, or when she was about five years of age. It commenced in a small spot about the size of a quarter of a dollar. There is no traceable history of contagion. Where we remove the crusts a red surface is exposed, which remains so for some time. The surface is red and shining, it does not exude, and the disease has eaten down to the rete Malpighii, which is laid bare; it does more than that, it eats down wherever it finds dermal tissue. The patches are generally oval in shape, mostly of a greenish color; the hair is thin. It destroys the hair more than tinea. There are spots where the hair will not grow; that is, where we see the head red and shining. If we arrest the spread of the disease now, there will be sufficient hair left to grow and cover the whole of the head. There will be some bald spots, but not enough to show. As the disease spreads, it passes down the hair-follicle and root-sheaths, destroying the hair-follicle. I show you some of the Sydenham Society's plates which are marked herpes tonsurans, but are really favus. I show you a model showing the disease as it appears on the upper lips: the scales have been removed, and nothing remains but the cups.

We have here two cases which present the forms in which favus may appear. With regard to the prognosis in the boy, it is by far the best, as all we have to do is to pick out the crusts and rub in a little diluted citrine ointment: it will be well in a week. I have picked out one of the crusts from the boy's cheek: it is the prettiest demonstration I have ever made or seen,—the yellow solid mass circular, with its upper part cupped and depressed. The child with the favus capitis may be a year in being cured. If in a hospital, it might be cured in a month. It is difficult to be exact as to the time of effecting a cure, as individual cases vary much. The treatment is local, and consists in epilation, as the fungus reaches down to the bottom of the hair-follicle and it has to be removed. The hair should be cut short before commencing treatment, and after epilating a five-grain solution of the bichloride of mercury should be rubbed into the diseased patches with your own hands.

ACUTE PUSTULAR ECZEMA.

This case of acute pustular eczema over the face and scalp I have shown you several times before. The skin is dry and harsh; there is congestion and thickening of the skin of the face, also thickening and scaling of the scalp. I show you the case that you may see the good effects of treatment, and also the rebellious nature of the disease. The child is still using linseed oil and oil of cade. As there is not much itching, and as constant stimulation may increase the thickening, we will omit the oil of cade and continue the alkaline baths, and afterwards anoint with linseed oil. At first she took acetate of potassium, with spiritus Mindereri to stimulate the activity of the skin, and also cod-liver oil. She is now taking a tonic containing arsenic, iron, etc.; but I think that she will do better under an alkaline treatment.

ERYTHEMATOUS ECZEMA.

As we learn a great deal from seeing diseases in the various stages of treatment, I show you this girl with erythematous eczema of the head and forehead. When we first saw her, you will remember, the eruption was moist; now it is dry. I do not allow patients with eczema to wash as often as they desire, but tell them when to do so. She has been taking: ℞ Sol. Fowleri, f℥ij; Mist. rhei et sodæ, f℥iv; a teaspoonful three times a day after meals. Locally: ℞ Ol. cadini, ℥i, Ungt. zinci oxid., Ungt. simplicis, āā f℥ss.—M. Two weeks ago she was using ungt. zinci oxidi et plumbi.

I do not know whether you have all felt and appreciated the swelling of the glands in the neck. They were at one time enlarged to a great extent, as a result of inflammation. Some would think that it was due to syphilis; but it is not.

ECZEMA RUBRUM OF THE LEG TREATED WITH RUBBER BANDAGE.

This colored man has had the eruption which you see on his leg since February, 1879. It made its appearance at the junction of the middle and lower thirds of the leg, as the result of a burn, which he painted with iodine. This, causing irritation, gave rise to an eczema, which spread until it now occupies the entire left leg, extending up on to the thigh, and being limited below as if it were marked out by the band of his slipper. On the right leg there are marks of eczematous sores. He says that these latter were never ulcers, and that it is not more than a month since they healed up. He gives no history of any previous eruption.

I had him keep the bandage on the leg that you might see its operation in eczema. It produces a great deal of sweating in ulcers; in eczema it causes a dryness and scaling, much of the function of the sweat-glands being arrested. The beauty of the rubber bandage is that it does not denude the surface, and that it possesses the advantage over the ordinary bandage of permitting the patient to walk and stand on it, yielding with the leg and foot. The leg has now ceased to exude; but if you allow the bandage to remain off for a length of time it will exude again. I have seen the diseased surface cease to exude altogether and have healthy tissue underneath. The bandage should be taken off at night, washed, and hung up, and the leg also washed.

ECZEMA CAUSED BY FLANNEL.

I show you this case merely for diagnostic purposes. You here see the results of scratching, the irritation being undoubtedly due to the use of red flannel. Some may say that it is not an eczema, but a dermatitis; but, from its extreme itchiness, thickening, and chronicity, I would call it an eczema.

ORIGINAL COMMUNICATIONS.

MYALGIA.

BY JAMES C. WILSON, M.D.,

Physician to the Philadelphia Hospital and to the Hospital of the Jefferson Medical College, etc.

A VERY large proportion—much larger than is commonly supposed—of cases in which pain is the principal symptom are due to myalgia. This affection may be defined as a morbid condition of voluntary muscles, of which the chief and often the only symptom is pain on movement. Myalgia, as a general term, has few synonymes: it is sometimes called myodynia. This affection has no essential relation to rheumatism or the rheumatic diathesis. Therefore the common use of the term "muscular rheumatism" as a synonyme for myalgia is an error. This error has occasioned much confusion of thought and mistaken medication, and tends to main-

tain the obscurity which overhangs the subject of the so-called (and often miscalled) rheumatic affections in general. That true rheumatic processes may extend from serous or fibrous structures to contiguous muscular masses has (in the absence of demonstration) been assumed by many writers of authority; but that acute or subacute rheumatism, with its recognized characters, ever manifests itself primarily or exclusively as an inflammation of muscle-substance is an assumption wholly without clinical or pathological support. The term myo-rheumatism is as inapplicable as muscular rheumatism, and lacks the sanction of usage. Myositis is a term used to describe (1) an acute inflammation of muscle often traumatic and commonly attended by suppuration; and (2) a chronic, indurating, inflammatory process, not infrequently due to syphilis. Neither of these conditions resembles the affection under consideration in its clinical aspects, nor is allied to it pathologically.

As manifested in particular muscles or groups of muscles, myalgia has long been described under the terms cephalodynia, torticollis (*m. cervicalis*), pleurodynia (*m. pectoralis vel intercostalis*), lumbago (*m. lumbalis*), dorsodynia, omodynia, scapulodynia (*m. dorsalis*), etc.

This affection must, in the present state of our knowledge, be classified with the diseases of nutrition in the more narrow sense. It is not a diathetic disease.

To Dr. Inman, of Liverpool, is due the credit of first having pointed out the frequency of this malady and the ease with which it is mistaken for other and much more serious diseases,—an error in diagnosis which has been followed by grave results, especially in the case of nervous and self-centred females and other hypochondriacal persons. It cannot, however, be denied that this author, carried away by his enthusiasm, exaggerated the importance of this local affection at the expense of undervaluing the frequency and significance of other painful disorders which have their origin in the nervous system.

To Dr. Inman we also owe the term myalgia, which has the positive merit of embodying the idea of pain as the chief symptom of the disorder and the muscles as its seat, and the not inferior negative merit of implying no erroneous theory as to its nature and cause.

This affection is described in few, even among the most recent, text-books. In others it receives merely incidental mention. In the majority of them it is passed over in silence. Yet it is obvious that the descriptions of muscular rheumatism—which are rarely omitted—are based upon and refer to cases of various kinds which for the most part are not rheumatic at all, and very frequently are examples of myalgia.

Myalgia is essentially "pain produced in a muscle which is obliged to work when its structure is imperfectly nourished or impaired by disease." Hence all influences which unfavorably affect the nutrition of the muscles, all diseases which directly affect the integrity of their structure, predispose them to this affection. The defect in nutrition may be only relative to the amount of work the muscle is called upon to do, or there may be absolute mal-nutrition implicating the whole body. The muscle may be impaired by local diseases which affect it alone, or it may share in morbid processes which also involve other and distant structures.

Sedentary occupations, leading, as they do, to poor nutrition of the muscular system from want of proper use and exercise, mal-nutrition from a diet deficient in amount and defective in kind, or in childhood from too rapid growth, the chronic wasting diseases, the state of convalescence from acute maladies, and, finally, degenerative diseases of the muscles themselves, all favor the development of myalgia. Among the acute diseases which by their derangement of nutritive processes especially render those who have suffered from them liable to this painful affection of the muscles during convalescence, is acute articular rheumatism. It is this fact, taken together with the use of a misnomer, that has given rise to the view that the muscles share with the serous and fibrous structures in the lesions of that disease, and that myalgia is "rheumatism" of the muscles.

There is, however, over and above these defects in nutrition an especial predisposition or idiosyncrasy, the nature of which is unknown, which renders certain individuals far more liable to suffer myalgic pain than others. This predisposition is encountered in those who have an inherited or acquired gouty taint, and in those who are free from gout, with perhaps equal

frequency. It is not associated with a special liability to true rheumatism.

The most common exciting cause is overwork pure and simple, especially overwork which brings into excessive and prolonged exercise unaccustomed muscles. Next in frequency is exposure to cold, and especially to damp cold, when overheated or over-fatigued. Finally, inevitable and incessant contractions, such as are physiological and are performed without consciousness or sensation in a healthy state of the muscles, will, in muscles that are defectively nourished or have undergone fatty, granular, or fibroid degeneration, cause more or less distinct myalgia. As examples of myalgia due to the first of this group of causes, I may cite the pain in the adductors of the thighs after a hard ride when out of practice, the epigastric pain in children suffering from measles or other acute affections attended with persistent cough, and the pain of spasm, in particular that which follows tonic spasm, such as occurs from reflex causes in the calves of the legs at night and in bathers. Many of the pains of childhood which are classed in common parlance together under the head of "growing pains" are myalgic in their nature. Examples of the second form may be instanced in the pains of wry-neck or lumbago, such as often occur in those who, being very tired but otherwise healthy, fall asleep in a draught of air, or in those who, coming home at evening in cold weather, find a leaking pipe in the cellar, and, stooping over it to stop it, or in some other emergency of every-day life, bring into excessive use unaccustomed muscles in an atmosphere that is at once cold and damp. Examples of the third group are common enough in the flying or fixed muscular pain and soreness that occur in wasting chronic diseases and in the convalescence of acute maladies where prolonged muscular effort is too early undertaken. Certain forms of præcordial pain met with in degenerative lesions of the muscular substance of the heart are without doubt myalgic in character, and will, when the clinical data of such conditions come to be more fully understood, be recognized as having more or less diagnostic value.

The chief symptom, the one symptom that is common to all cases, is pain. It is sometimes, especially in the acute cases, constant; more frequently it is slight or wholly absent when the patient is at rest, with the affected muscles in full extension. But it is invariably present or aggravated when the muscles are called into action. It is experienced throughout the muscular mass, but is most intense at or near the points of tendinous insertion. Its character is usually stabbing or stitch-like; sometimes it is acutely dragging or tearing, at other times it is like the soreness of a contused or inflamed part. It is—in acute cases frequently, in chronic cases almost invariably — accompanied by a sensation of stiffness in the affected muscles. The pain is essentially the same in all cases, variations in its character and severity being due to differences in the opportunity for physiological rest in different groups of muscles. The most obstinate and severe form of myalgia is that which occurs in the intercostal muscles and their fibrous aponeuroses,—pleurodynia. Here the affected muscles are constantly concerned in the respiratory movements, and have no time for physiological rest except in the intervals of these movements. Scarcely less stubborn and severe are the myalgias of the great muscles of which the principal function is to maintain by their nicely-balanced and ever-varying contractions the erect position of the head and trunk. Less painful and of shorter duration are the myalgias of the limbs: less painful, because prolonged intervals of absolute rest may be voluntarily secured; of shorter duration, because it is by rest that the balance of nutrition is most speedily restored.

Some degree of tenderness usually exists over the whole extent of the myalgic area. It is often, however, slight, except in the region of tendinous insertion, to which it is in many cases wholly restricted. It is not associated with cutaneous hyperæsthesia. Spasm does not, as a rule, occur in the acute cases except when the muscles are brought into use. In chronic cases, however, a condition of tonic spasm, a spastic rigidity, with more or less persistent painfulness, comes on, and in very chronic cases such tissue-changes take place as result in great impairment or absolute loss of contractile power, with or without atrophy.

Objective signs are absent, except that it is evident that the patient assumes by preference an attitude of repose, and that

it keeps the involved structures as much as possible at rest. Pyrexia does not occur. The appetite and digestion are not impaired. Acid sweats are not present. The urine shows no constant or characteristic alteration. There is no tendency to endocardial or pericardial inflammation. If constitutional disturbance be present, it is trifling and due to prolonged local suffering and want of sleep. In by far the greater number of instances the patient remains in his usual health except the local malady.

Myalgia may affect the voluntary, and perhaps also the involuntary, muscles of any part of the body. Those most frequently involved are those subjected to continuous and excessive work and at the same time liable to exposure to cold and damp. The most common and important varieties have already been mentioned.

The aching, dragging pain in the back of the neck, so frequent in poorly-nourished nervous women and in other cases of neurasthenia, the so-called pain of nervous exhaustion, is myalgic. It is felt chiefly during fatigue, is present in the erect posture, and is almost always relieved when the patient lies down. It is referred sometimes to the base of the skull, sometimes to the whole of the back of the neck, but most commonly to the spinal region just above the level of the upper borders of the scapulæ, and constitutes a harassing symptom of the cases in which it occurs. In this connection we must not overlook the fact that many of the pains of that obscure condition to which the term spinal irritation has been applied are myalgic.

The duration of acute myalgia is usually brief, lasting from a few hours to several days; that of the chronic form is indefinite, tending to last years,—sometimes, under unfavorable circumstances, even a lifetime,—with varying periods of exacerbation and remission, which are, after the disease is fully established, much influenced by the phases of the weather.

The essential pathology of myalgia is obscure. The more closely we study our cases, the more obvious becomes the fact that it differs in all important clinical and pathological characters from rheumatism, and that, when these two conditions are associated, the relationship is accidental and not causal. Still less does it resemble neuralgia. It is not an inflammation, as that term is generally understood; but there is ground for the opinion that the lesions are of the nature of a *sub-inflammatory* process within the muscle-substance. The not uncommon instances in which an injury or contusion has been followed shortly after recovery by severe myalgia are of some value as illustrating this theory.

The indications for treatment are threefold: (*a*) relief of pain, (*b*) physiological rest for the affected muscle, (*c*) restoration of the balance between the nutrition of the muscle and the work it has to do.

(*a*) Relief of pain is often secured by rest in a position that permits the complete relaxation of the muscles involved. In acute cases, due to overwork pure and simple, and where complete rest is attainable, little other treatment is required. In the course of a few hours or days the function of the muscles is fully restored and their contractions are performed without pain. When, however, complete muscular relaxation is impracticable or fails to afford relief, anodynes are necessary. Morphia hypodermically is very useful, but this altogether independently of any local action. The continuous application of dry or moist heat by means of hot-water bags, flannels, poultices, spongio-piline, etc., is also useful. Anodyne lotions do good, and liniments containing aconite, belladonna, chloroform, or chloral may be especially recommended, as may also the compound belladonna liniment of the British Pharmacopœia. Plasters of belladonna, conia, and menthol also relieve pain. Galvanism occasionally gives prompt relief. The same statement may be made of static electricity. The pain sometimes disappears under gentle and long-continued massage.

(*b*) Rest is usually enforced, in some degree at least, by the intensity of the pain which attends movement. In severe cases rest in bed becomes a necessity. In affections of the respiratory muscles, as pleurodynia, firm support of the side by means of overlapping strips of plaster drawn from the spine downward and forward in the direction of the ribs to the median line in front is sometimes necessary and always comfortable.

(*c*) The balance of nutrition is restored by rest. Local means to further this end are such as relieve pain,—namely, heat,

anodyne and stimulating frictions, massage, and galvanism. The parts must be protected from sudden changes in temperature by extra thicknesses of flannel or sheets of wool or cotton batting, covered, if necessary, with a piece of oiled silk or fine gum cloth. In old cases, prolonged massage, with passive movements, and the slowly-interrupted galvanic current alternating with rapid faradic currents, are followed by good results.

As constitutional measures, a Dover's powder at night, followed by mild purgation in the morning, is often indicated. Purgation is especially called for in plethoric or gouty persons, in whom also Turkish or vapor baths are of good service; while poorly-nourished, anæmic subjects demand quinine, iron, lime, and cod-liver oil. If the attack linger, full doses of ammonium chloride, and, in old cases, of potassium iodide in moderate doses, well diluted and long continued, are advocated; and in stubborn cases Anstie recommended deep acupuncture of the muscle near its tendinous attachment. In cases marked by a tendency to spastic rigidity, the repeated hypodermic injection of atropine may often be relied upon as the speediest means of cure. Where the general nutrition is poor, the local trouble is apt to be obstinate, and often yields only to measures that restore the general health.

A CASE OF CHOLECYSTOTOMY.*

BY W. W. KEEN, M.D.†

ALBERT HENRY K., German, æt. 45, residing in Philadelphia, was admitted into the hospital September 21, 1885, during the service of Dr. W. W. Keen. Parents healthy. He is the only living one of twelve children; the rest died during infancy.

General health was good, with occasional attacks of gastro-intestinal catarrh. Four years ago he had a severe attack of colic, the pain arising in the right hypochondriac region and extending to the umbilicus. The attack lasted several hours, and was relieved by medicine. The following year he had a similar seizure, followed by a chill, loss of appetite, vomiting, and constipation, and in a short time the conjunctiva was jaundiced.

He had another attack June 12, 1884, followed by nausea, vomiting, chill, loss of appetite, constipation, high-colored urine and clay-colored stools, with marked jaundice of his whole body, which has continued ever since. Since that time the attacks have become more frequent, occurring once or even twice weekly.

Since January 1, 1885, he had been under medical care, but with no improvement. He first came to the dispensary August 6, and was under observation and treatment, but without any change for the better.

Upon admission, it was noted that he had lost some flesh; his mind was dull; the skin, conjunctiva, and mucous membranes were intensely jaundiced; marks of scratching appeared on the abdomen, and he suffered much from itching and stinging at night; the pulse was 54 and full; tongue slightly coated with yellow fur in the morning. His appetite was poor, the bowels costive, and the stools were of a clay color. He also complained of flatulence and constant tenderness and distress in the epigastrium. The urine was high-colored, acid, sp. gr. 1025; no albumen was detected, and no sugar; bile-pigment was present.

Physical examination showed a tumor below the margin of the ribs in the right hypochondriac region; it extended from the right nipple-line three and a half inches towards the median line, and to within two and a quarter inches of the umbilicus. It was not absolutely flat upon percussion, but tender and elastic. The liver-dulness extended from the sixth interspace in the nipple-line to one-fourth inch below margin of ribs. The abdomen was not distended; spleen of normal size; lungs and heart both normal.

September 24. Had severe headache; pain in the epigastrium, followed by a rigor lasting three hours, then fever. 5 P.M. Temp. 101.5°; pulse 80; podophyllin (gr. ½ at night) acted freely on the bowels.

September 28. Dr. Keen introduced into the tumor a hypodermic needle, and thought that he detected a stone. A very small quantity of liquid was withdrawn: it was dark-colored, and mostly blood.

October 1. An aspirator-needle was introduced into the tumor three inches, and a probe passed through it. A stone was detected.

October 4. He had a chill, which lasted three hours, followed by the usual symptoms. The operation which was appointed for the next day was, therefore, postponed.

October 10. Dr. Keen, assisted by Drs. Grove, Mears, O'Hara, Willitts, Elmer, Learned, Boyd, and others, operated, with the usual antiseptic precautions, including the spray, carbolic acid being used.

The surface of the body was first washed off with carbolized water, and etherization was commenced at 1.30 P.M. An incision of three inches was made parallel with the margin of

* Read before the Philadelphia Academy of Surgery, November 2, 1885.

† For the careful notes of this case I am indebted to Dr. Elmer, Surgical Resident of St. Mary's Hospital.

the ribs, commencing one and a half inches below the ensiform cartilage, and extending over the prominence of the tumor. All the vessels were tied with catgut ligatures. The abdominal walls were thick. All hemorrhage had ceased before the peritoneum was opened. Now the liver came into view, and what was thought to be the tumor—the distended gall-bladder—proved to be an enlarged left lobe of the liver, presenting much more to the right than usual. The gall-bladder could neither be seen nor felt.

In order to obtain more room, the incision was prolonged about two inches to the right. The colon and omentum were now exposed. Still the gall-bladder could not be detected with certainty; but a hard mass could be obscurely felt, which was believed to be gall-stones. It lay transversely, directly in front and slightly to the right of the spine, and almost absolutely in contact with it. To obtain still more room to work at such a depth, another incision was made, beginning at the inner end of the first incision, and extending downward in the linea alba three inches. The closest search was made for the gall-bladder, but there was still much doubt as to its situation.

From the posterior part of the transverse fissure, almost in contact with the spine, an apparently uniform mass, continuous with the gastro-hepatic omentum, extended downward and forward, in the posterior part of which, as stated, the gall-stones could be somewhat obscurely felt near the liver; and, farther away from it, a softer mass, which ought to be the flaccid gall-bladder. These lay in such relation to each other that the gall-stones were thought to be in the cystic and the common duct.

Into this softer mass—the supposed gall-bladder—a small opening was made; but it was soon evident that this was the duodenum, as the finger detected the pylorus. Discovering this, the wound in the duodenum was closed with five interrupted and five Lembert's sutures, all of carbolized silk. The harder mass containing the gall-stones was now carefully lifted by the finger and thumb, and the wall and tissues in front of it cautiously incised for about three-fourths of an inch, and two stones, respectively three-fourths and one and one-fourth inches in size, removed. The gall-bladder was as firmly contracted around them as a kid glove clasps the finger, and contained absolutely no fluid. The opening of the cystic duct could be felt by the finger, and was patulous. No other stones could be felt. A probe, it was thought, could be passed from the cystic to the common duct.

The wound in the gall-bladder was stitched with four interrupted and four Lembert's carbolized-silk sutures. All hemorrhage had apparently ceased. The cavity was carefully cleansed, and the abdominal walls, including the peritoneum, were sutured with wire, and the wound dressed with bichloride-of-mercury gauze. The operation lasted until 4.45 P.M. His pulse during the operation was never more than 75 nor under 60, and his skin was fairly warm; but his respiration, from early in the operation, was sighing.

After the operation, he suffered from moderate shock. Hot bottles were applied along his extremities.

5 P.M. Temperature 99.5°; pulse 88. He suffered very much pain, and complained of thirst. Morphine, gr. $\frac{1}{6}$, and cracked ice.

5.30 P.M. Hiccough; relieved by atropia, gr. $\frac{1}{120}$.

7 P.M. Pulse 96, and compressible; temp. $99\frac{4}{5}°$. Morphine, gr. $\frac{1}{6}$. Small quantities of brandy-and-water were given at intervals.

9 P.M. Feeling quieter. Still complains of pain.

11 P.M. Pulse 104; respiration 24. Morphine, gr. $\frac{1}{6}$, was given at intervals. Through the night he gradually failed.

October 11. At 7 A.M., pulse very feeble and rapid; temp. $101\frac{2}{5}°$. Digitalis and brandy were given; but he did not rally, and died at 8 A.M.

The post-mortem examination was made at 12 M. Rigor mortis well marked, though the trunk was still warm. All the abdominal contents were deeply jaundiced. About six to eight ounces of blood were found in the belly, and, as the greater part of it was behind the peritoneum and extended to and around the right kidney, it presumably came from vessels injured in the lifting of the mass in which the gall-stones were situated. This had been carefully done, as it was impossible to obtain access to it otherwise at such depth, but it required some force. No hemorrhage had been observed during or immediately after the operation. There had been no bleeding from the operation-wounds, either in the shrunken gall-bladder, the walls of which were very thin, or from those in the duodenum or the abdominal walls. There was no hemorrhagic tendency noticed, as is so often the case in such operations. There also had been no escape of bile or intestinal contents into the peritoneal cavity. No organs were observed except those concerned in the operation.

The liver, gall-bladder, stomach, duodenum, pancreas, and colon were removed in mass, and the specimens showed the following facts:

The left lobe of the liver, especially its anterior portion, was much enlarged and considerably twisted to the right, so that its semilunar projection occupied the position of the gall-bladder, and was easily mistaken for it before the operation. The liver was deeply fissured between the right as well as the left lobe and the lobus quadratus. No gall-bladder existed in the proper site for it, but it was found lying transversely in a shrunken

condition, as stated, far posteriorly. The common and cystic ducts were patulous, and a probe was passed freely into the gall-bladder from the duodenal end. The wounds in the gall-bladder and the duodenum were effectively closed by the sutures, and no escape of the contents had taken place. No other gall-stones were found. The mucous membrane of the duodenum was deeply congested for a wide extent, undoubtedly from inflammation existing before the operation. The duct of the pancreas was pervious.

So far as I am aware, such complications as this displacement of the gall-bladder, its shrunken condition, and the impossibility of deciding what was and what was not gall-bladder, have not before been reported. It may be said that the incision should have been first made at the place where the stones were felt; but it was decided not to do so, on account of the obscurity with which they could be felt lying under considerable tissue, which might, in the displaced position of the gall-bladder, be a part of the intestines or contain large vessels, and at the depth at which they were situated it would have been exceedingly difficult, if not impossible, to control the hemorrhage or repair the damage to the intestinal wall, should it have proved to be the intestine. Indeed, I seriously debated even abandoning any attempt to remove the stones at one time, on account of the difficulty of reaching them; and, on reviewing the case, I am inclined to believe that it would have been better to close up the abdominal wound, and trust to the possibility of the stones ulcerating into the duodenum, to which the gall-bladder was already closely matted.

The fatal issue in the man's debilitated condition was due to the shock of a prolonged operation and the moderate after-hemorrhage.

One other point demands notice. It is very evident that the hypodermic needle-point did not touch the stones, and it is somewhat doubtful to me whether the probe passed through the aspirator-needle did, judging from the depth at which they were found. But the sensation of scratching such a stone was so deceptive that all three of the resident physicians, as well as myself, were clearly under the impression that the probe certainly did do so, and we were fairly certain that the hypodermic needle also did.

A CASE OF ACQUIRED SYPHILIS WITH SECONDARY LESIONS, THE RESULT OF TATTOOING.

BY SPENCER TROTTER, M.D.

CASES of syphilis not acquired in the ordinary way, through sexual intercourse, are so rare comparatively that the following one may prove of interest not only in its medical but also in its legal and moral aspects:

In September, 1884, Arthur K., æt. 18, a native of Missouri, was admitted into the lower surgical ward of the Pennsylvania Hospital,—service of Dr. Thomas G. Morton,—suffering with a suppurating wound in the fold of the left elbow, which had been done with a knife in January of the same year, had healed up, and then broken down again.

On examination, there were found scattered over the body patches of pustulo-squamous syphiloderm; the genital organs were found to be exceedingly small,—undeveloped, in fact,—and from his statement he rarely had an erection, and then very imperfectly, and never had had a nocturnal emission. There was neither history nor sign that there had ever existed any primary lesion on the genitals. His arms and forearms were tattooed with well-executed designs. He gave the following history.

In 1876 he was first tattooed, and since then off and on until March, 1884, when the last two pieces were executed on the left forearm. Previous to this the tattooing, which was done by different individuals, had never given rise to any sores or symptoms other than the slight irritation from the materials employed. One of these last two pieces was the figure of an elephant, which was done by a man who *wet the needle-holder in his mouth* to outline the design, and then worked in the vermilion and India-ink. This was followed in several weeks (he did not remember the exact time intervening) by a distinct, suppurating ulcer, which lasted for some time. Two months after this (in May, 1884) the cicatrix in the fold of the elbow broke down into an ulcer. In June (1884), three months after the primary lesion, a patch of pustulo-squamous syphiloderm appeared on the back, and since then others have developed on other parts of the body.

The patient does not remember having the roseolar and papular eruptions of the early secondary stage, but "copper-colored" maculæ were observed on the trunk, and the half-arches and velum palati showed the condition characteristic of secondary syphilis. An axillary and an epitrochlear bubo were found on the left side, and by a careful inspection with a lens a distinct scar, the cicatrix of the chancre, was found in the saddle of the ele-

phant figure. The patient was placed on the protiodide of mercury in combination with an iron salt, but left the hospital in a short time of his own accord, very slightly improved.

This case is one of peculiar interest, inasmuch as we are able to draw a positive conclusion as to the source and point of infection of syphilitic poison by excluding the almost undeveloped genitals as a factor in the acquisition of the disease.

Undoubtedly a "mucous patch" or some other form of syphilitic lesion existed in the mouth of the person who tattooed our patient last, who *wet the needle-holder to outline the design by putting it in his mouth*, for his tattooing was the only one followed by a distinct "sore," which was without doubt a chancre, as it was followed by secondary lesions.

PHILADELPHIA, October 16, 1885.

NOTES ON THE NEW ANTISEPTICS, HYDRONAPHTHOL AND THE POTASSIO-MERCURIC IODIDE.*

BY R. J. LEVIS, M.D.,

Surgeon to the Pennsylvania Hospital and to the Jefferson College Hospital.

THE following are the claims made for the newly-discovered antiseptic, hydronaphthol:

It is at least twelve times as effective as carbolic acid, and is entitled as a true antiseptic to occupy a position in the comparative tables next to the mercuric bichloride.

It is thirty times as potent as salicylic acid, sixty times as effectual as boric acid, and has six hundred times the antiseptic power of alcohol.

Hydronaphthol is soluble when placed in cold water to the extent of one part in two thousand. It is soluble in hot water in the proportion of one to one hundred; but when the water becomes cooled to ordinary temperatures a precipitate occurs, leaving a solution of one to one thousand. In this strength of one to one thousand it permanently prevents the development of the germs of putrefaction in all putrescible fluids.

Whilst the true antiseptic or *inhibitory* action of hydronaphthol in such cold aqueous saturated solution is perfect, its germicidal and proper disinfectant power is ineffective. For the destruction of already existing germs, such as have a tenacious vitality, as those of anthrax bacilli and pathogenic micrococci, it therefore cannot be relied on. As to its action in this regard, as compared with carbolic acid, it should be remembered that a ten-per-centum carbolic solution is required,—a strength practically improper in wound-treatment. In ordinary antiseptic practice, carbolic acid is valuable only on account of its inhibitory action.

The first use of hydronaphthol as an antiseptic was by Dr. G. R. Fowler, of Brooklyn, to whom the profession is indebted for its introduction to practical surgery. My own experience with the antiseptic action of hydronaphthol in the wards of the Pennsylvania Hospital and in private surgical practice confirms his observations, as given in his recent articles in the *New York Medical Journal.*

Hydronaphthol is a grayish substance, in the form of crystalline laminæ having a slightly aromatic taste and odor. It is soluble freely in alcohol, ether, chloroform, glycerin, benzole, and the fixed oils.

In the aqueous saturated solution of one to a thousand it is absolutely unirritating, and has no toxic action, either local or systemic, is free from unpleasant odor, and has no injurious action on metallic instruments or on clothing-fabrics.

Besides its use in aqueous solution, I have used it in the form of a powder diluted, preferably with the oxide of zinc in the proportion of one to fifty.

I believe that hydronaphthol may well displace carbolic acid from practical surgery.

The potassio-mercuric iodide is four or five times as powerful as a true germicide or disinfectant as the mercuric bichloride. For such use it is effective in aqueous solutions in the proportion of only one to twelve thousand.

The potassio-mercuric iodide is made by simply dissolving equal quantities of the biniodide of mercury and the iodide of potassium in distilled water. The solution is evaporated, and there remain yellow, needle-like crystals of the potassio-mercuric iodide.

In the use of such dilutions of this powerful antiseptic, local irritation is entirely avoided, and the risk of producing the

* Read before the Philadelphia Academy of Surgery, November 2, 1885.

constitutional effects of mercury is greatly diminished.

The introduction into surgical treatment of these two remarkable and powerful substances, hydronaphthol and the potassio-mercuric iodide, will do much to overcome some of the objections and inconveniences of antiseptic practice.

TWO CASES OF LIGATURE OF THE DORSALIS PEDIS ARTERY FOR HEMORRHAGE.

BY CHARLES A. SEWALL, M.D.,
Acting Assistant-Surgeon, United States Army, Post-Surgeon, Fort Selden, New Mexico.

THE following cases occurred at Fort Stanton, New Mexico: *Case I.*—Manuel Truxillo, Mexican. I found the patient bleeding profusely from a wound over the instep, caused by having cut himself with an axe ten days previously. After removing the wrappings, which were saturated with blood, I attempted to tie the bleeding vessels in the wound by enlarging the incision, but the hemorrhage was so alarming it was thought best to ligature the dorsalis pedis artery. This vessel was readily exposed and tied just below the annular ligament. The ligature came away on the seventh day, and on the twelfth after the operation the wound had entirely healed. No anæsthetic was administered.

The second case occurred in a soldier. Private W., Sixth Cavalry, while cutting wood for the garrison ten miles from the post, cut his foot severely with an axe over the instep. Although the soldiers, his comrades, used various methods to stop the bleeding, when brought to me at the hospital the man had fainted, had a rattle in his throat, and indeed was almost moribund. Hypodermics of ether and brandy were given every half-hour until about twelve had been taken, and a large enema of brandy and beef-tea was introduced into the rectum, as extreme nausea forbade the administration of stimulants per os. An Esmarch's bandage controlled the hemorrhage temporarily.

The following day Assistant-Surgeon Marcus E. Taylor, United States Army, who had been absent from the post at the time of the injury, returned, and tied the dorsalis pedis artery under an anæsthetic. An attempt was made to tie the bleeding vessels in the wound, as in the first case, but without success. A drainage-tube was introduced, and healing proceeded in the usual felicitous manner common to all wounds at Fort Stanton, owing, doubtless, to the high altitude (six thousand one hundred and fifty-one feet) and pure dry air. Antiseptic precautions were taken in both operations and in the subsequent dressing of the wounds. These two cases occurred within two weeks of each other, and from this coincidence my attention has been drawn particularly to wounds of this region,—the dorsum of the foot. From an investigation into the anatomical relations of this class of injuries, we find that they are surgically important for two reasons,—first, the prominent position of the part renders it particularly liable to injury from chopping-instruments; and secondly, owing to its vascularity, a cut—at any point—could lay open almost a net-work of vessels.

When we remember that the dorsalis pedis artery feeds no less than four fair-sized arterial trunks,—viz., the tarsal, metatarsal, dorsalis, and hallucis,—and communicating, besides inosculating by the last-named vessel with the external plantar, to form the plantar arch, and that these vessels have branches ramifying in various directions, particularly the metatarsal, with its digital branches, we cannot but admit that hemorrhage in this locality is a serious accident, and that it will be the best course to pursue in the majority of instances to "make assurance doubly sure" by tying the main source of local arterial supply, as the only hope for its complete suppression.

A CASE OF OBLIQUE HERNIA OF THE OVARY.

BY CHARLES BAUM, M.D.

MRS. P., æt. 36, married, is of English descent. Although nervous and spare, never robust, she has not suffered from disease, except dysmenorrhœa of moderate severity. She has had one abortion, and is the mother of three large, healthy children, the last labor having occurred two years ago: it was marked by partial placenta prævia. Since this labor she has complained at times of dragging pains in the pelvis, but was not prevented from performing her household duties. Nausea and a tendency to syncope accompanied these pains, which were always more severe at what would have been the menstrual

periods. The babe was weaned when thirteen months old. Menstruation recurred ten months after the labor, and each epoch thereafter was marked by nausea, vertigo, uterine tenesmus, and a sensation as if the uterus were being dragged from the pelvis by violence. For about three weeks a swelling had gradually been enlarging in the left groin, until a limping gait was assumed for relief of the dragging pain in the pelvis. When I examined the parts, twenty months after the labor, an evenly-smooth, olive-shaped swelling, about one and one-half inch in length by one inch in width, occupied the left inguinal canal. None of the signs of inflammation were present. Pressure on the mass provoked nausea, while traction caused an increase of the dragging pain, which was referred to the uterus. The ovary was reduced in a few minutes by taxis, unaided by anæsthesia. A truss was directed to be worn, but this advice the patient neglected.

One month later, just before her menstrual period, the ovary again was found occupying the inguinal canal, and while in this situation menstruation occurred, causing great swelling, tenderness, and pain, with some redness in the left groin, accompanied by frequent emesis, prostration, and tearing pains, referred to the uterus. When the period had been completed, spontaneous reduction of the ovary occurred.

630 North Broad Street, Philadelphia.

NOTES OF HOSPITAL PRACTICE.

CHICAGO MEDICAL COLLEGE HOSPITAL.

SERVICE OF WALTER HAY, M.D., LL.D.,

Professor of Nervous and Mental Diseases, and of Medical Jurisprudence.

Stenographically reported by William Whitford, M.D.

CEREBRAL CONGESTION—PETIT MAL.

GENTLEMEN,—Our first patient presents all the appearances of health. She says that her mother was strong and robust, having had nine children, all in good health; her father, too, was hearty, powerful, and robust. As far as can be ascertained, her ancestry was very healthy. This is important, because it justifies us in excluding any hereditary taint or proclivity. It also excludes the existence of the neurotic diathesis as a predisposing cause of disease. The next things to be considered are the patient's age and history. She is 16 years of age. She is well developed, and has all the appearances of good health. Two months ago, we are informed, she menstruated for the first time, and about three weeks ago she menstruated again scantily. While it is evident that the girl's nutritive processes are active and vigorous, at the same time the uterine functions seem to have been dormant. The evidence goes to show that, coincident with the first effort at the manifestation of its functional energy by the uterus (which manifestation was difficult and feeble, not from organic disease or obstruction in the ordinary sense of the word, not from any uterine disease, but simply because of inefficient, gradual, tardy assumption of its physiological functions), our patient was suddenly seized, while at work, with giddiness, followed, not immediately, but speedily, by loss of muscular power and of consciousness,—in fact, there was a suspension of all the nervous functions,—during which condition she remained, we are told, *perfectly still*, with a flushed face. After about twenty minutes, as near as can be learned, she recovered consciousness. This attack was followed by another somewhat similar just about the time of the next menstrual period, or shortly after it, and this one by another.

We have here the evidence of increased intravascular pressure, which was not relieved by the customary discharge from the uterus, and we have also probably an explanation of the insensibility. After a superficial analysis of the case, the diagnosis "epilepsy" is plausible. Let me call your attention to the differential diagnosis of epilepsy. Epilepsy has for its essential phenomenon spasm, indicating increased irritability in the medulla and pons, expressing itself in reflex spasms, the first spasmodic phenomenon expending itself upon the cerebral blood-vessels. This is the first morbid phenomenon in an attack of epilepsy, the vaso-motor spasm being indicated by extreme pallor of the face, dilatation of the pupils, and insensibility. The spasm in epilepsy may not involve the spinal centres or manifest itself in the muscular apparatus. In this case we may have no general convulsion, but simply epilepsy in the form of what is known as "petit mal." In addition to this unconsciousness, we may have spasms of the muscles of the neck, compression of the cerebral veins by the spasmodic action of

the muscles, obstruction to the return of venous blood from the sinuses of the brain to the heart, and, as a consequence, speedily supervening epileptic coma, upon the occurrence of which the spasm ceases. Now, inasmuch as respiration is entirely arrested in an attack of epilepsy, the convulsions cannot continue longer than a minute and a half, because death would ensue. In this case, however, we have a narrative of insensibility extending to twenty minutes, her parents having fixed that time on three different occasions. Had they said an hour, I should have regarded it with some degree of doubt as being merely a guess, but they fixed the time at twenty minutes. They probably carefully observed the time of the insensibility during the attack. *True* epilepsy could not exist for such a length of time. In this case there were no convulsions of the muscles, no vaso-motor spasm, because we are told that her face was "bright red," but there was unconsciousness due to increased intracranial pressure or congestion of the brain. There should have been a congestion of the uterus at that time, and that congestion should have been relieved by the menstrual process. Our patient, as is the rule with women in a healthy condition, makes more blood than is necessary for nutrition, and the excess of that blood should be eliminated every four weeks by the uterus; but in this case the excess was not discharged. Moreover, her attention was being occupied by a certain amount of brain-work: hence the brain was in a state of physiological activity, and the blood was attracted towards it, consequently there was congestion of the brain instead of congestion of the uterus. For this reason, and acting upon this theory, I prescribe the following: Fluid ext. ergot, 25 grammes; water, 25 grammes. M. Sig.—Take teaspoonful at bedtime.

There is no drug which will so promptly and efficiently contract the blood-vessels in the nerve-centres as ergot. It can very rapidly induce cerebral anæmia. The indication in this case is to keep guard over the cerebral circulation. The case is not epileptic just now, but might be developed into such a state very readily. The frequent recurrence of increased vascular pressure within the brain might induce permanent dilatation of the vessels in the medulla and pons, and the dilatation might establish, by reason of its increased vascularity, a condition of increased irritability in the convulsive centres, which, constituting a predisposing cause, might establish the condition known as hystero-epilepsy, related to the menstrual function, and, coincident with it, the menstrual function appearing and interposing as an exciting cause.

In an epileptic paroxysm, with contraction of the blood-vessels and pallor of the face, the application of nitrite of amyl to the nostrils will result in a flushing of the face. The drug will overcome the vascular spasm in the brain, increase the intravascular pressure, and arrest the paroxysm instantly. But nitrite of amyl applied to a case like this, with vascular pressure in the brain already increased, as indicated by the red, flushed face, unusual congestion or possibly a hemorrhage within the brain would be readily induced. The vascular pressure would be increased still further by reason of the exhaustion of the vaso-motor energy, and it might be sufficient to precipitate hemorrhage, or it might be sufficient to overcome the vaso-motor resistance altogether without rupture, and thus occasion a fatal arterial congestion of the brain.

A point of practical importance in connection with the treatment of this case is the color of the face. If you have a patient with a pallid face, presenting a condition of syncope without convulsions, never throw water on her, because it is simply a barbarism; but let her lie down, and the unconsciousness of syncope will give place to the consciousness of restored circulation in the brain. Place your patient in a horizontal position, lift the feet, and the face will flush instantly. If the patient has a flushed face, such as this girl presented, apply cold cloths or ice to the elevated head, to induce by their reflex effect contraction of the blood-vessels and relief of the pressure within the brain. It is very probable that this patient will continue to have these attacks of cerebral congestion until the menstrual function is properly established.

PETIT MAL.

I will call your attention to the marked contrast between the predisposition in this case and the other. Our other case was a girl with a flushed face, apparently robust and healthy, and without any hereditary taint; but here we have a patient 32 years of

age, whose mother was insane, in all probability, for eleven years. On the father's side, we are informed that there was an uncle subject to similar attacks. This presents to us the neurotic diathesis by inheritance. She also has unconscious periods. The "spells," as she terms them, first developed when our patient was but two years of age, about which time she had an attack of measles. Now, there are some points of interest connected with these attacks to be distinguished from typical cases of epilepsy. You recognize the epileptic character of the disease, but it is not a typical case of epilepsy. It is a case of the non-convulsive form. We have no history of falling, struggling, or frothing at the mouth, but there is a peculiar expression about the eyes: they look wild and glassy. She does not fall very often during these attacks, but, as she expresses it, "works with her hands." Now, that may be spasmodic or automatic. It is not uncommon for the convulsive paroxysms in epilepsy to be substituted by a type of mental perversion, delirium, or epileptic mania. This is an instance, in all probability, of what I described to you as petit mal,—the non-convulsive form of epilepsy,—the seizure marked by premonitory symptoms, by the "aura epileptica," as it is termed. This is a perversion of sensory innervation, apparently peripheral in its origin, and pursuing a centric or centripetal course, usually beginning in the stomach and creeping up gradually to the head, following which is insensibility. This is characteristic of the true epileptic seizure, although this is not a typical case, as it is the non-convulsive form. The contrast between the two cases is very marked.

The prognosis in this case is bad. The woman in all probability has inherited a diseased brain—structurally and organically diseased—from both sides of the house. "Like produces like," always and everywhere.

A fruitful source of epilepsy is chronic alcoholism in parents. It is probable that the father died from some cerebral disease. She tells us that the doctors said there was a "rush of blood through her father's head after a surgical operation, and that his face was red for some hours after death," indicating increased vascular pressure. Here we have another source of the neurotic diathesis, the predisposing agencies and influences to establish it in this woman. It is clearly established, not only by the history as related, but by her present appearance and expression of countenance. This has become habitual, and alone would induce me to suspect the existence of epilepsy, even if there were no history of the case.

If we can keep the paroxysms under control we may accomplish some good to the woman, but I scarcely look for a complete recovery or any material benefit in this case. After the disease has existed for a period of thirty years, organic changes have probably taken place in the brain which are irremediable. For this case we prescribe the following:

℞ Potassii iodidi, 5 grammes;
Potassii bromidi, 25 "
Ammonii bromidi, 15 "
Ammonii carbonatis, 3 "
Infus. gentianæ, 200 " M.
Sig. Teaspoonful before each meal and at bedtime.

TRANSLATIONS.

PROSTATIC ENLARGEMENT.—Dr. Guyon advises the adoption of the following rules by those suffering with prostatic trouble:

1. Avoid all causes of chill, general or local.

2. Absolutely forbid excess in eating and drinking; seek to prevent abuse rather than to proscribe the use of injurious food and drinks. It is not only excesses in stimulating or alcoholic drinks that the prostatic subject should avoid, but even excesses in drinks the most inoffensive in themselves. It is for this reason that advice to adopt the hydro-mineral treatment should be given only with great circumspection.

3. Avoid voluntary and prolonged retention of urine in the bladder: in resisting the desire to urinate, these patients expose themselves to serious accidents,—retention, cystitis, etc.

4. Sexual indulgence should be moderate, observing the precept *Non morari in coitu.*

5. Keep in mind the evil influences which are exerted at night by the horizontal decubitus and the prolonged immobility. At night avoid a long rest in bed.

A walk of fifteen minutes up and down the room may be taken before retiring, and on rising, with great benefit. In the daytime, in order to prevent contracting sedentary habits, activity is recommended, avoiding fatigue in walking or riding. Constipation is best treated without drastics: a large lavement, warm or cold, taken on rising in the morning, exercises an action at once evacuating and derivative. Often an emollient enema is useful at night, which is to be retained.

6. The skin should be carefully guarded and kept in good condition by dry frictions, massage, and warm baths.

Dr. Tuffier (*Thèse de Paris*, 1885) has shown that in patients with hypertrophy of the prostate the bladder and kidneys are chronically congested, and are thus on the verge of inflammation.

The treatment of prostatic enlargement varies with the period of the malady. In the first period a vigorous hygienic treatment only is needed; catheterism should be forbidden. The second period calls for the catheter to accomplish the evacuation of the bladder. This will have to be repeated in accordance with the degree of the retention. Sudden retention requires antiphlogistic treatment before catheterizing. In difficult cases hypogastric puncture (aspiration of the bladder) may be practised. The next day the catheter may again be used with facility. If it remains difficult, a sound may be retained. The evacuation should be gradual and antiseptic.

Strictures of the urethra may be the site of congestions which bring about a transitory difficulty of micturition or complete retention. In this case the obstacle is found at the level of the stricture. This is a grave complication, and may require aspiration of the bladder, where other treatment has failed.

The *rôle* of congestion in the diseases of the urinary passages in women is also very important. The vascular connection of the uterus and bladder predisposes the latter to all the congestions occurring normally in the uterus. Vesical affections are aggravated at each menstruation and during pregnancy. Certain uterine affections lead to a chronic congestion of that organ, and, consecutively, to congestion of the bladder. The resulting urinary troubles, in such cases, disappear after the treatment of the disorder of the uterus alone.—*Revue de Thérapeut. Méd.-Chir.*

Intramuscular Injections of Metallic Mercury in Syphilis.—At the Grenoble Congress, Dr. Luton, of Rheims, read a communication, of which the following is a *résumé*:

1. The muscular tissue offers a way, preferable to the cellular tissue, for the absorption of metallic mercury.

2. This absorption is proved (*a*) by the therapeutic effects, (*b*) by the production, possible but not constant, of mercurial stomatitis, and (*c*) by experiment on animals.

3. Sulphur, given in an electuary, in a dose, at the least, of five grammes daily, constitutes a remedy for mercurial sore mouth far superior to chlorate of potassium.

4. The amount of metallic mercury, at the beginning, should be one gramme at most, taking into consideration, in repeating the injections, its value in bichloride (1 gr. to 1.354 gr.).

5. The advantages of this method are efficacy, the protection of the digestive tract, and the readiness of giving the remedy at regulated intervals.

6. The intramuscular injections of metallic mercury are at present recommended only for grave and chronic cases of syphilis at the period of transition and in the tertiary stage.—*La France Méd.*

Cocaine and Resorcine in Whooping-Cough.—Professor Moncorvo has advocated, in several published communications, the use of resorcine in whooping-cough as a local parasiticide and antiseptic application to the laryngeal mucous membrane. He further advises the preliminary employment of cocaine solution (ten per cent.). Not having any specific action upon the germs (?) of the disease, cocaine by itself is not curative, but as an adjuvant it has great value in reducing or removing the excitability of the pharynx, and in facilitating the topical applications of the germicide agent.—*Bull. Gén. de Thérapeutique*, September 30.

Topical Application for Neuralgia.—

Chloral hyd.,	0.50	gr.
Menthol,	0.50	"
Cacao butter,	1.	"
Spermaceti,	2.	" M.

Make into a cone-shaped mass.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 14, 1885.

EDITORIAL.

ALTERATIONS IN ARTERIES AFTER THE APPLICATION OF LIGATURES.

FEW among the many active medical societies of Philadelphia have accomplished results that can be compared with those of the Pathological Society. Since its organization in 1857, its career has been, with the exception of a brief period during the height of the excitement and anxiety attending the civil war, one of uninterrupted activity and usefulness. A new departure dating back a few years, by which specially-prepared papers have been presented at the semi-annual meetings, has led to most gratifying results. For some time these papers were read by active members of the Society, and added to the local interest in the proceedings as well as to the value of the Transactions. Important contributions from the pens of Drs. Cohen, Seiler, and others will not soon be forgotten. More recently the Society has had the good fortune to secure for these semi-annual meetings papers and addresses from active workers in pathology outside the city, and is under obligation to Delafield, of New York, and Sternberg, of the United States Army, for papers of great intrinsic value and of the widest interest as embodying the results of pathological research not only original, but also essentially American. To this list is now to be added an important paper by Professor J. Collins Warren, of the Medical Department of the University of Harvard, read at the last meeting. It is entitled "A Comparison of the Changes in Arteries after Ligature and in the Ductus Arteriosus and Umbilical Arteries after Birth."

This article, which is the result of a long series of personal studies by its author, presents views in some respects wholly at variance with hitherto accepted teachings. Dr. Warren found the earliest changes after the ligature of an artery in continuity to be the formation of a thrombus in the vessel, and the development of a mass of inflammatory tissue or callus around the point of ligature externally. No perceptible cell-action can be observed on the inner wall with low powers during the first week, although occasionally a limited proliferation of the endothelial cells near the point of ligature can be seen with high powers, and a few wandering cells may be found to have penetrated the walls of the vessel at the same point.

In the second week, the bundle of fibres of the adventitia which was held by the knot becomes absorbed, and the two ends of the vessel retract slightly from each other, leaving the ligature embedded in and partly disintegrated by the granulation-cells. At this time the walls of each portion appear to form a complete *cul-de-sac*, as though the healing process were complete. But this is by no means the case, for the beginning of the second stage is marked by the unfolding of the ends of the vessel, the walls of which now separate somewhat after the manner of the opening of a bud, permitting the entrance of a considerable quantity of the granulation-tissue. Disintegration of the thrombus follows, with the formation of an internal callus protected from the blood-current by a small fragment of clot. The ligature may be wholly disintegrated and absorbed, or it may become encysted, or, finally, a small abscess having been formed at its site, the fragments of thread may be discharged through a sinus opening externally. The second stage is completed when the internal growth has reached the neighborhood of a branch. The external callus, which, as in fracture of the long bones, is merely provisional, is ab-

sorbed, and eventually the two ends of the vessel are connected by a slender cord of varying length, the walls being slightly separated by a cicatrix consisting of connective tissue externally, inside of which is another layer consisting largely of unstriated muscular fibres, the surface being covered within by a new endothelium. We have here a scar made up of three layers, resembling closely the three walls of the vessel. A somewhat different series of changes is seen in the large vessels of amputation-stumps. At first the end of the vessel is embedded in granulation-tissue, and contains a thrombus of varying length. In the second week marked changes are observed in the intima, extending some distance from the point of ligature. After several months, the vessel is found in the form of a cord running from the first large branch to the cicatrix of the stump. This cord laid open shows the walls preserved, its interior filled with new tissue in which are spaces occupied by one or more vessels, the condition resembling that known as obliterating endo-arteritis. A comparison of these two modes of healing with the changes seen in the arterial system after birth shows certain resemblances in the two processes.

The ductus arteriosus at the time of birth, in certain important respects, differs in structure from the aorta and pulmonary artery. The media is much thicker than in either of these vessels: it is thrown into irregular folds, which are increased at the time of birth. The outlines between the different layers are less marked than in the walls of other vessels. The lamina elastica is indistinct, and in places apparently wanting. The media consists chiefly of longitudinal layers of muscular fibre, a few circular bundles existing in the outermost layers. A few weeks after birth the greater portion of the walls of the ductus undergo hyaline degeneration, the outer or circular fibres of the media alone remaining. There is at this time an active growth of long, spindle-shaped cells, with staff-shaped nuclei at the edge of the media bordering on the opening into the aorta; there is also thickening of the intima. Eventually the hyaline tissue becomes absorbed, and is replaced by a band of fibres continuous at each end with the media of the large vessels. At the aortic end, in a longitudinal section, the media is seen slightly separated at the point of the cicatrix, and between the two and continuous with them are the longitudinal fibres of the ligamentum arteriosum. In the centre of the depression marking the site of the cicatrix a small vessel is given off into the axis of the ligament, where it either loses itself in a capillary net-work or becomes continuous with a similar vessel coming from the pulmonary artery. Dr. Warren pointed out in detail the points of resemblance between the changes in the ductus and in the hypogastric artery and those seen in the main trunk of an amputation-stump. A slight portion of each vessel is destroyed; both retract, and are attached to the terminal cicatrix by a band of fibrous tissue; both remain as pervious vessels with thickened coats and narrow calibre. In both the process is not unlike that seen in so-called obliterating or compensatory arteritis. Dr. Warren, however, regards "arteritis" as a term hardly applicable to the changes taking place in normal arteries after birth. Nor can the alterations which are developed through the whole length of a large vessel extending a considerable distance from the original seat of inflammation be strictly regarded as of an inflammatory nature. He is disposed also to regard the obliterative growths in terminal arteries in widely-removed portions of the body of the same individual as not of an inflammatory nature, but rather as a secondary and formative process, closely connected with disturbances in the mechanism of nutrition, designed to adapt the vessels to a diminished blood-supply.

THE USE OF ARSENIC IN CHOREA.

ONE of the strongest arguments against the organic-lesion theory of chorea is found in the fact of the remarkable influence exerted upon the disease by the administration of arsenic and by rest. Even occurring in the lower animals, it has been found to be controlled by this remedy. Fowler's solution has been administered hypodermically to a choreic dog with success. In London, at a recent meeting of the Harveian Society, Dr. W. B. Cheadle reported, as the result of an experience in one hundred and sixty cases clinically observed during the last eight years, that the arsenical treatment materially shortened the duration of the disease, cases using it terminating in recovery within five weeks, as the rule; whereas with no treatment they extend from eleven weeks to a year or more.

Its value was recognized by Todd; but, like others since his time, he dreaded its toxic effects. The form in which it is best used is in combination with iron, and Dr. Cheadle prefers the ordinary liquor arsenicalis (liquor acidi arseniosi, U.S.P.) in ordinary doses with tincture of ferric chloride. A series of cases treated with arsenic recovered, on the average, in twenty-nine days; in others, treated with other remedies, its course averaged forty days. Although the remedy is usually well borne in the doses in which it is employed, yet Dr. Cheadle noticed a hitherto-undescribed effect when the arsenic is given to young children, in the form of a bronzing of the skin resembling Addison's disease. The discoloration was most marked on the body in the flexions of the large joints, but not on the face. It afterwards faded away; although in one case the process was very slow. The pigmentation was similar to that produced by chronic congestion of the skin, and was not analogous to the metallic deposit in argyria. The results reported by Mr. Cheadle* are confirmatory of the observations of others; and, while they indicate that arsenic is one of the most efficient of our remedies in the treatment of chorea, it is not to be inferred that the remedy is to be used to the exclusion of chalybeate and other tonics, which have also been found useful as adjuvants.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE American physician who for the first time undertakes to look through the many hospitals and medical schools of London must find his task somewhat bewildering. Such, at least, has been my experience, notwithstanding that I brought with me letters of introduction to half a dozen prominent members of the profession here, who have kindly afforded me all the assistance that could be expected of them. The local guide-books mention upwards of fifty hospitals, and I have run across at least one very important institution of the kind which most of them do not describe,—to wit, the Central London Throat and Ear Hospital, of which Mr. Lennox Browne is the senior surgeon. Of medical schools, great and small, there are fully half that number. In fact, nearly every hospital of any consequence has a school connected with it; many of the smallest even have each a little coterie of students who accompany the visiting physicians and surgeons on their rounds through the wards, and have the exclusive right to study the patients therein treated. This system of decentralization doubtless has its advantages for the students, but it has also very manifest disadvantages. The largest city in the world, with a population of about four millions and a vast amount of clinical material, ought to be a centre of medical education second to none. With such an affluence of material, and numerous resident teachers ranking among the first in their respective specialties, it is remarkable that London has no polyclinic or post-graduate school, but sees every year three or four hundred American physicians alone, to say nothing of physicians from other English-speaking countries, including Great Britain itself, pass its very doors and go to Vienna, Berlin, Paris, and other Continental cities, where they have to encounter the difficulties of a foreign tongue in addition to those of the medical studies they desire to pursue. Some day there will probably be a change in this respect, but it is not likely to come soon. Conservatism stamps

* British Medical Journal, October 24.

everything here, and the profession, even if unitedly desirous of centralizing medical education, could not very speedily bring about the necessary changes in the hospital regulations.

Though the schools nominally opened last Thursday, they are not yet fairly settled to the work of the session. Some of the more famous professors, notably Sir Joseph Lister, who is one of the staff at the King's College Hospital, have not yet returned from their vacations. Mr. Bryant, of Guy's Hospital, delivered his first lecture yesterday. His subject was clinical investigation, and, along with much other excellent advice, he earnestly counselled the exercise of the utmost gentleness in all examinations and manipulations.

At the Royal Free Hospital on Gray's Inn Road, connected with which there is a medical school for women, I saw a very neat ovariotomy done on Tuesday last by Mr. William Rose. The tumor was of moderate size, and there were no adhesions. The incision made measured only about four inches. He operated under the carbolic spray, and used the entire Listerian dressings.

Dr. W. S. Playfair is the only gynæcologist or surgeon in London, so far as I can learn, who does the Emmet operation for laceration of the cervix uteri. One of the oldest and most eminent of English teachers in this department of medicine was examining cases the other day before a ward-class and in my presence. One poor woman placed on the table presented a typical case of an old laceration of the cervix, with much swelling of the entire organ, as is usual. It was pointed out to the class as a hypertrophied cervix, and orders were given to have it cauterized. In a subsequent conversation with the professor I found that he was a total disbeliever in Emmet's operation; but what seemed strange to me was that even the fact of the existence of a laceration in such cases was entirely ignored. This is astonishing, when the true state of the case can be so conclusively demonstrated by simply bringing the separated lips together with two tenacula, when the so-called ulceration and most of the hypertrophy disappear.

Last evening I had the pleasure of hearing a very notable discussion at the meeting of the London Obstetrical Society. There were, first, reports by two young gentlemen of peculiar obstetrical cases. One of them described as an extra-uterine pregnancy a case in which both the fœtus and placenta were finally delivered by the way of the uterus and vagina. There had been a lump in the right groin, with symptoms of pregnancy which ceased about the third month. He dilated with sponge tents, and, examining under chloroform, found an empty uterus which measured only two and one-quarter inches. Shortly after this procedure labor came on, and the fœtus and placenta were in due time delivered *per vias naturales*. The reporter was very positive that it was a tubular pregnancy, and that the products were discharged first into the uterus, and thence in the usual way. Some of your readers will doubt this, and so did the wise old heads of the Society. A committee was appointed to investigate the case, and it was particularly insisted that the woman herself should be examined, to ascertain if she might not possess a double uterus.

After this came the *pièce de résistance* of the evening, a paper by Dr. Matthews Duncan on "Lupus of the Vulva." At a previous meeting of the Society, two or three months ago, he had contributed a paper upon the same disease, and this was a continuation of the subject. Four or five cases were narrated of a peculiar affection characterized by elephantoid tumors of the labia and clitoris especially, but often involving the anus also, and showing a marked tendency to undergo ulcerative degeneration. The so-called urethral caruncles were considered by Dr. Duncan to be usually a form of his "lupus of the vulva." Numerous colored drawings representing the cases reported were passed around. The discussion was very spirited and interesting.

Mr. Jonathan Hutchinson, judging from the very full clinical histories and the illustrations, considered the lesions to belong to an aggravated and very intractable form of tertiary syphilis.

Dr. Playfair had seen elephantiasis in India, and when he met with the kind of cases described by Dr. Duncan he treated them as he would treat that disease, considering them practically the same.

Dr. Thin had made microscopical examinations of Dr. Duncan's cases, and had found the disease to be histologically similar to but not identical with elephantiasis. Neither was it syphilis or epithelioma. He found it to be different from those diseases both histologically and clinically. On the other hand, it certainly was not the lupus of dermatologists, —lupus vulgaris. He considered it a disease by itself, which merited a separate name, and could only be classed under the name lupus when that word was used in its old generic sense.

Dr. Duncan, in reply, stood his ground boldly; admitted that the disease he referred to was not lupus vulgaris, but, in his emphatic way, scouted the idea that it was either syphilis or elephantiasis. He announced his intention of reading a third paper upon the same subject at a future meeting.

It should have been stated before that among several other gentlemen who took an incidental part in the discussion was the venerable Dr. West, who was the predecessor of Dr. Duncan in St. Bartholomew's Hospital.

In several of the inaugural addresses at the opening of the medical schools last Thursday, mention was made of recent actions against physicians for certifying to the insanity of persons who were claimed to be sane. Some of these actions, it seems, went against the

physicians, who were mulcted in damages. The profession here is much disturbed over the matter, and it is generally agreed that medical men should all refuse to sign any certificate of insanity until the law is so changed as to protect them in so doing. Your very able London correspondent, Dr. Fothergill, has probably referred to this subject, and therefore it may be an old story to your readers; but you will pardon my calling attention to the fact, in this connection, that Dr. J. Kingston Fowler, in his address at the Middlesex Hospital, urged in forcible terms the identical views as to the relation of physicians to the confinement of alleged lunatics which were broached by the writer hereof in a paper contributed to the *Philadelphia Medical Times* nearly three years ago.* The argument he advanced was that physicians had not asked, and did not desire, to have imposed upon them the purely judicial function of deciding who should be restrained of their liberty on account of insanity; that however much dependence might be placed upon the testimony of physicians—especially upon that of experts in mental disease—as to the fact of unsoundness of mind, the final order for commitment, or at least for prolonged detention, of alleged lunatics should be issued by some magistrate or judge. This idea was elaborated by Dr. Fowler, who proposed, by way of meeting certain objections, that a physician's certificate should still be sufficient warrant for placing a patient under restraint, if need be, in an asylum, but that within forty-eight hours after such a commitment a magistrate should regularly investigate the case, with the help of a competent physician as an expert, and take the responsibility of either ordering his detention or of turning him loose upon the community.

Drs. Ringer and Murrell are still engaged in the very important work of testing experimentally, in the chemical and physiological laboratory, the value of various new drugs which from time to time are claiming the attention of physicians. They have just completed an analysis of the various preparations of pepsin, pancreatin, and malt extracts. Certain well-known American preparations, especially Fairchild's extractum pancreatis, have been found the most active; and, speaking of pharmaceutical matters, it was gratifying to find an American firm of only six years' standing—Messrs. Burroughs, Wellcome & Co.—to have fairly taken the lead among London pharmacists,—or chemists, as they are called here. Their preparations, and full lines of American pills for which they are agents, are now to be seen in nearly every fashionable chemist's shop.

BOARDMAN REED.

October 8, 1885.

* "The Insufficiency of the Laws governing Commitments to Insane Asylums," Boardman Reed, M.D, *Philadelphia Medical Times*, vol. xiii. p. 258.

NEW YORK.

AT the meeting of the County Society for October 26 the present officers were re-elected. Dr. A. Jacobi offered the following amendment to the by-laws, which was adopted unanimously:

"*Resolved*, That the *Comitia Minora* be directed to recommend no applicant for admission to membership unless he be a graduate from a medical college in good standing, or a licentiate of a regular unsectarian State or county medical society of this or any other State; or, if his diploma or license be of sectarian character, unless the applicant declare in writing his or her abnegation of sectarian principles and practice."

The Society wrestled with the question of how to compel delinquent members to pay their dues. With this view the following amendment to the by-laws was passed by a small majority:

"If any member shall fail to pay the yearly dues within thirty days after the fourth Monday in November, when the same shall become payable, it shall be the duty of the Treasurer to serve, in the manner in which notices in suits are required to be served on attorneys, upon each member so in default a copy of this by-law, and a notice to the effect that, unless such dues are paid within fourteen days thereafter, his name and the amount due by him will be reported to the Society at its next succeeding stated meeting, and entered upon the minutes; and if they are not so paid, the Treasurer shall report the same accordingly. At the next stated meeting of the *Comitia Minora* after the date of such report, the *Comitia* may, by order, without further notice, strike from the roll the name of any member continuing in default, and he shall thereupon cease to be a member of the Society; provided that, upon his written application explaining such default, and the payment of all dues to the date thereof, or provided that the *Comitia* unanimously remits the arrears, the *Comitia* shall have power to remit the penalty of this by-law."

The Secretary, in explanation, said that a similar by-law had been found to be very effective in the Bar Association of this city.

Fault has been found with the Medical Register which has been issued for some years by the New York Medico-Historical Society, it being thought especially that it should not omit the names of any of the members of the County Medical Society. Inasmuch, however, as the County Society (as indicated by the amendment to the by-laws proposed by Dr. Jacobi) admits to membership some who are graduates from other than regular medical colleges, the publishers of that Register think they are justified in their course. The outgrowth of all this was the following proposed amendment to the by-laws:

"It shall be the duty of the Secretary to prepare annually, and send to each member

of the Society, a register containing the names, addresses, and office-hours of the active members of the Society,—the register to be prepared at such time and in such manner as the *Comitia Minora* shall direct."

Dr. Jacobi thought it would be better to provide yearly for such a register by special vote rather than by by-law. There was also much other information which he would like to see in the register, and which was not contained in the Medical Register for the States of New York, Connecticut, and New Jersey.

Dr. A. L. Loomis was in favor of issuing a register containing the names of all legal practitioners in New York State and surrounding counties, and offered an amendment to the proposed by-law to that effect. Perhaps Dr. Loomis had in view, when he offered the amendment, to issue a register which would be valuable for general reference, which should not pretend to decide the question as to who were or were not regular practitioners by excluding the names of some who were nevertheless legally qualified to practise; and, being for general use among physicians of all classes, it would command a greater sale and be less a burden to the Society. It became evident, however, that the work and expense of such a register would be great, and it was therefore somewhat hastily decided to refer the whole matter to the *Comitia Minora* with power. What power the *Comitia* now has in the matter is probably a question in the minds of many; but no one imagines that it will decide at present to issue more than a register of the Society's membership.

WASHINGTON.

THE PUBLIC-HEALTH ASSOCIATION—MUSEUM OF HYGIENE—SMALLPOX INSPECTION SERVICE—WASHINGTON OBSTETRICAL SOCIETY—MEDICAL AND SURGICAL HISTORY OF THE WAR—PERSONAL.

WASHINGTON, November 4, 1885.

THE Committee of Arrangements of the American Public-Health Association is actively at work preparing for the coming meeting of the Association in December. The sessions will be held in Willard's Hall, attached to Willard's Hotel, where the headquarters of the Association will be. President Cleveland has been invited to attend the opening session, and has signified his intention of being present. The Commissioners of the District of Columbia will also attend, and Mr. Edmunds, the President of the Board, will make an address.

The rate of fare on all railroads south and west of New York, except the Chicago and Northwestern, will be reduced to two-thirds of the regular rate for the round trip for members.

After the adjournment, an entertainment in the shape of an oyster-roast will be tendered the visiting members and their friends by the local committee. It is expected also that President Cleveland will hold a public reception during the meeting.

At the Museum of Hygiene attached to the Navy Department, an elaborate series of experiments upon the siphonage of traps is now being made. The observations will soon be completed, and the results then made public.

A strict inspection of passengers and baggage is being enforced on the Canadian frontier to prevent the introduction of smallpox from across the border. It is believed that no infected persons have gained entrance to this country since the inspection service has been established. The service is under the general direction of the Supervising Surgeon-General of the Marine Hospital Service, but local appointments are made only upon the recommendation of the respective State Boards of Health.

The recent election of officers in the Washington Obstetrical Society resulted as follows: President, Dr. A. F. A. King; Vice-Presidents, Drs. W. W. Johnston and J. Taber Johnson; Recording Secretary, Dr. C. H. A. Kleinschmidt; Corresponding Secretary, Dr. S. S. Adams; Treasurer, Dr. G. B. Harrison.

The final volume of that monumental work, the "Medical and Surgical History of the War," is in an advanced stage of preparation, and is expected to be ready for the printer before the end of the year. Dr. Charles Smart, of the army, is writing the volume. It will be illustrated by many fine colored plates, like the other volumes in the series.

Dr. D. L. Huntingdon, of the Surgeon-General's Office, who has been absent in the West for about a month, has returned, and is again on duty here. G. H. R.

PROCEEDINGS OF SOCIETIES.

AMERICAN ACADEMY OF MEDICINE.

THE Ninth Annual Meeting of the American Academy of Medicine was held at the hall of the New York Academy of Medicine, October 28 and 29, 1885.

FIRST DAY, AFTERNOON SESSION.

The President, Albert L. Gihon, A.M., M.D., in the chair. The meeting was opened with prayer by Rev. Mr. Vandycke.

Dr. R. L. Sibbet, of Carlisle, Pennsylvania, read a paper on

THE STUDY OF MEDICINE AS A MEANS OF EDUCATION.

In Canada there were twelve medical schools, all of them regular. In the United States there were eighty-seven schools teaching rational medicine; the number of those engaged in teaching sectarian medicine was twenty-five. Sectarian medicine might be regarded as an American product, the first

school of the kind being established about fifty years ago in Pennsylvania. There was no need under any circumstances of rational medicine affiliating with sectarian medicine. The necessity of a preliminary and classical education was dwelt upon. As a rule, he said, preliminary examination was not required; classical studies were generally treated with indifference; the degree of M.D. was often conferred upon persons without even a knowledge of English grammar or orthography. No medical school in this country had adopted a higher standard than Harvard, yet here the standard was much lower than that required in the same institution for admittance to the freshman's department. The general practitioner, he said, if called upon in court to define the mind, could tell as little about the faculties of the mind as about the heavenly constellations. The author favored State medical boards of persons who would examine aspirants in general as well as in medical branches of knowledge.

MEDICAL SUPERVISION IN STUDENT-LIFE.*

Dr. Henry O. Marcy, of Boston, then read a paper on

THE CLIMATIC TREATMENT OF DISEASE, WITH THE ILLUSTRATION OF NORTH CAROLINA AS A HEALTH-RESORT.

Sanitation, in view of our knowledge of the influence of micro-organisms, had passed from the realm of theory and become based upon fact. Pure air, pure water, and pure soil now meant air, water, and soil free from infectious elements of disease. Enough was known of the bacillus tuberculosis to show that it could exist in all countries and climates, but its development was favored by cold, damp localities. Dr. Denison's climatic maps were shown, and some of his observations on the influence of altitude and other conditions of climate on the consumptive were quoted with approval. Clinical experience taught that, for those who were able to endure it, active out-of-door exercise in an elevated region exerted a beneficial influence upon the respiratory organs of the phthisical. The special advantages and physical features of the Blue Mountains of North Carolina, especially those about Asheville, were then pointed out. The temperature never became extremely warm or extremely cold; it seldom rose above 85° F. At places there was no frost during the entire year. The water was pure; the surroundings were beautiful and inspiring.

At 8 P.M. the President, Albert L. Gihon, A.M., M.D., read the following address on

WHAT IS MEDICINE?

The place of the Academy is not to be sought among the pathological, clinical, sanitary, and other national associations. It antagonizes none of these, but seeks to cement all into a compact unity.

Reasons for the slow growth of the Academy are:

In the first place, the fundamental condition of membership restricting Fellowships to graduates in medicine who have received degrees in letters in course.

As the co-operation of every educated man interested in the objects of the Academy is desirable, I am of opinion that the time has come when every limitation to Fellowship should be removed, except the solitary requirement that the candidate shall be in fact, as in title, "learned in medicine," and in all else that that implies; but would make it impossible for any one unfit or unworthy, though he come with an armful of diplomas, have subscribed to the most inflexible of codes, and no matter what faculty, society, or institution he may be delegated to represent.

Nominations should be accompanied by the fullest record-evidence, and be made long enough in advance—three, six, nine months, or a year—to enable the Council to determine each man's fitness.

A second reason why the Academy has not met with more pronounced sympathy and support is its necessarily hostile attitude to institutions and individuals who defy the principles of its constitution.

The Academy encounters a third obstacle in the lukewarmness of quasi friends,—some damning it with faint praise, and others exuberant in private but chary of public endorsement. An instance was given of a medical editor who could not follow his wish in this respect through policy; but the editorial columns of the medical press were usually pre-eminently high-toned. Publishers were inconsistent in permitting under the same cover advertisements of medical concerns, drug-factories, and proprietary clap-traps. Why should the business-venture of men who get up sham colleges be advertised in reputable journals? The *Medical Record* commends the resolution of the Florida Medical Association against the establishment of a medical college in that State. These encouraging signs of the times may be taken as offsetting the fact that thirty-nine of the eighty-seven regular schools in the United States are only fifteen years old, and twenty-one not over five. Trashy contributions from illiterate M.D.'s are published because they have been subscribers. If journals only reflect sentiment, let us ask ourselves the question, "What is medicine?"

If we look to this Academy for the answer, it will be limned clearly enough as the most profound and ennobling study which can engage the intellect of man. This, however, is not the popular idea. In their view, medicine is only something in a box or bottle prescribed by a man or woman who has acquired more or less skill in administering the partic-

* Will appear in the next issue of the *Times*.

ular remedy appropriate for each disease,—like other servitors whose offices are called for by the disagreeable incidents of humanity, only tolerated as a necessity. Sham aristocrats look down upon them; the plutocrat hires them as he does cook and coachman. In military and naval services he is sought to be degraded. The ministry of the suffering and afflicted is nowhere regarded as an outcome of the study of the stupendous and sublime mysteries of existence. In the national councils, in military and naval organizations, in civic administrations, who thinks of giving a *first* place to the physician, though his are the mental attainments which fit him best for counsel in all that concerns the welfare and progress of the human race?

The science of medicine involves the knowledge of everything that relates, however remotely, to the existence of man,—his place in nature, his origin, growth and development, preservation and continuance. The prevention and cure of those abnormal conditions which tend to his destruction are but one chapter in the volume which, coming near the end, cannot be read understandingly without the thorough comprehension and diligent study of all that precedes. Medicine is so far-reaching in its sources, and so concatenated with every other branch of knowledge, that he who would begin its study must first have drunk deep of the well-springs of human knowledge. Medicine is a science of such proportions that only a well-educated man can master it. Is this the view of it entertained by the profession at large? What are the facts?

Let us see how the profession is recruited. Ordinarily, a youth becomes a doctor, as he weds, from a whim; and those no longer young because, having failed in other occupations, they hope to make money by this,—knowing nothing of its responsibilities and requirements, without aptitude, ignorant and illiterate. Such a one goes to college, and as a first-course student listens to lectures on anatomy, practice, chemistry, surgery, etc., one after another, and without understanding a word of the technical language.

Seventy-nine colleges require evidences of preliminary education,—this only specious in most. Recent instances of illiteracy on the part of graduates before examining boards: "colume of murcury," "cours at Beleview," "anylitic," "assend," "admition," "diameter of the earth ninety-two thousand miles," "the Field of the Cloth of Gold some kind of tapestry," "an alterative acts like food on building up system and are favored in their action by stomachic or anything which arouses the system to action." Could the man who after graduation says "was began," and spells "gravatation," "femeral," "superating," "corpusels," etc., have ever comprehended the language used by his teachers?

Why should medicine be cheapened to every purchaser, and the college debase its teachings to their limited understanding? A collection of theses presented to American medical colleges during the last five years would be more entertaining than "English as She is Spoke." Only the utter ignorance of elementary chemical principles by the men who study medicine has made chemistry one of the seven chairs. It properly belongs to the academic course.

What only can medicine be to the ignorant members who are annually mustered into the ranks of the profession? To these men it can have no other aspect than that of a trade. They entered upon it as a money-making vocation; it was taught them as a source of pecuniary profit; they practise it for the fees they get.

Manifestly, then, medicine is not the same to all men, even medical men. If improper men can be excluded from national societies, why not from State, county, and city medical societies? This should be done for the protection of the community. Where a drug-clerk kills one victim by his carelessness, he saves a hundred by recognizing errors in physicians' prescriptions. Example from apothecaries' files:

℞ Solid ext. cannabis indicus, ℥j;
{ Syr. pruni Virg., } ℥j;
{ Syr. wild cherry, } ℥j;
Tr. opii, ℥iij;
Tr. opii camp., ℥j;
Aquæ, q. s. ℥iij. M.

Ft.—Tablespoonful doses to allay headache from coughing.

The debasement of medical education to the capacity of the ordinary purchaser of a diploma will eventually cause the profession to deserve the reproaches of its deriders. The public gauge the profession by the men with whom they most come in contact. The wise physician does not hesitate to say, "I do not know." The typical doctor affects an omniscience in inverse ratio to his knowledge.

Until the mystery of the first departure from health is made clear, all our therapeutics must be empirical and fundamental methods of cure all speculative. If we have not learned where disease begins, we have at least learned that the follies, vices, and errors of man have in their wake a multitude of ills, and these we can prevent; and the wise physician, learned in all that pertains to the normal life of the body, aims to protect it from those evil influences which experience has taught him will do it harm.

Preventive medicine has at last obtained recognition as the highest aim of the physician's art. It establishes new relations of the physician to the social system. It is not creditable to the intelligence of the age that in the department controlling internal affairs, among bureaus of labor, statistics, agriculture, education, etc., there is no bureau of public health. All sanitary service is the proper duty of med-

ical men. Preventive medicine has more to do than ward off epidemic visitations of great scourges. Its most important duty is to consider the impairment of health of growing children through the sanitary defects of our school system. The prevention of insanity, repression of crime, etc., are its legitimate duties. It is too much to expect antidotes for every microscopic germ. The tiny swarms around us are at once our friends and foes. If we do not antagonize them, they purify the air we breathe, the water we drink, the soil we tread, and prey upon our natural waste. Only our own folly causes them to turn and rend us.

Prone to hasty generalizations, we inconsistently denounce the doctrinaires who affect to believe in the panurgic virtue of similars, and ourselves find cure-alls in quinine, cocaine, germicides, etc.

Hence the greater need of impressing upon the tyro in medicine the fact that there are underlying principles never to be lost sight of. The old chair of Institutes of Medicine has gradually been supplanted by Principles and Practice. If I would banish Chemistry and Physics from medical colleges, I would establish a chair of the Philosophy of Medicine, and appropriately include the history of medicine, medical literature, medical jurisprudence, and medical ethics.

Reform is hampered by adherence to existing models. It will not do merely to establish adjunct chairs. The starting-point must be the requirement of a thorough preliminary education, to include an intelligent comprehension of the facts of chemistry and physics, of natural history and physical geography, of mathematics, languages, and belles-lettres. Four annual terms are necessary. Descriptive anatomy and the materia medica are enough for the first year; histology and practical microscopy, physiology in all its relations, and the mechanical processes of pharmacy, for the second; hygiene, general pathology, and general therapeutics, for the third; special pathology, special therapeutics, the philosophy of medicine, medical history, jurisprudence, and ethics, for the fourth. A fifth year to be devoted to clinical experience under supervision in public institutions.

Medicine has no need to rear its superstructure on any other foundation than the broad basis of fact. It has been dragged down to the level of commonplace occupations through the dissensions incited by the dogmas of theorists. There is no parallel between theological sects and medical "pathies." There is danger of too diffuse a system of differentiation. The tendency to degradation will be counteracted by more catholic views of morbid phenomena. The general practitioner will pay less heed to the artificial groupings of the nosologies, and look only to the grade of action exhibited by the pulse, the condition of the organic fibre, and the state of the secretions, no matter what name be given to the disease. When all physicians stand on the plane of higher medicine, there will be less tendency to diverge into extremist classes.

Is our estimation of medicine visionary, and have we sought the impracticable? Must we silence our voices because few care to hear, and cease our efforts because the task is difficult? Must we tread the beaten track lest we offend prejudices, antagonize pecuniary interests, and upset established orders? Not on this account shall we hesitate, if the truth be with us. The ethics of medicine rightly denounces fraternity with charlatans and quacks. Is our dishonor less if we degrade our noble profession by admitting to its rights and honors those who are ignorant, illiterate, and incompetent?

After the reading of the address the annual collation was served.

THURSDAY, SECOND DAY.

The Society was called to order at 10 A.M., by the President.

Dr. Thomas J. Turner, Medical Director of the United States Navy, read an interesting paper on

MEDICAL EVIDENCE.

It was followed by

REPORT ON LAWS REGULATING THE PRACTICE OF MEDICINE IN THE UNITED STATES AND CANADA,

by Dr. Richard J. Dunglison, of Philadelphia, and Dr. Henry O. Marcy, of Boston. It appeared that restrictive regulation regarding the practice of medicine had been made during the past year in only two States, —namely, Indiana and North Carolina. Letters from various prominent physicians throughout the States had been received, in most of which dissatisfaction was expressed at the present state of the laws regulating the practice of medicine.

HEALTH OFFICERS, ANCIENT AND MODERN.

Dr. Benjamin Lee, Secretary of the State Board of Health of Pennsylvania, read a paper with this title. The important position assigned to hygiene and State medicine during the past decade was evidence at once of an advanced stage of civilization and of dense and rapidly-increasing population. It indicated that the statesmen and the nation had at length reached that higher plane of political science in which they could appreciate Lord Beaconsfield's statement that "the health of the people is the first duty of the statesman."

After considering the health-laws as they had existed in Rome and in other cities, the author gave some suggestions with regard to how to establish an ideal board of health. The first point which he would make with reference to the organization of local boards

of health was that politics, in the bad American sense, should be utterly excluded. If there was any place where politics had no business, it was emphatically in a board of health. The fitness of the individual, and not his political opinion or his value as a ward-worker, should be the test. It followed from this dogma, which he regarded as fundamental, that boards of health should not be elected by the people,—certainly not in large cities. Boards of health should consist chiefly of physicians. Nor should what was called medical politics—the influence of schools or of cliques and dogmas—be allowed to interfere. The medical members should be graduates of a respectable regular school, of not less than three years' standing in the practice of the profession, and, if possible, they should be chosen from among those who had given attention to sanitary science. It was quite essential, however, that they be not all physicians. At least one member of the board should be a man eminent among his fellows for prudence and judgment in trade and commerce, for doctors were proverbially poor business-men. Emergencies constantly arose in which there was an apparent conflict between the interests of commerce and those of health. It was also desirable that one of the local municipal authorities be on the board. There should also be an agent constantly employed to make investigations regarding the sanitary condition of all localities under supervision of the health board. This person should be a most trusted and respected physician and sanitarian, and he should receive sufficient pay for labor performed. In his ideal board all the members should receive a fair salary.

After a recess, Dr. Samuel N. Nelson, of Cambridge, Massachusetts, read a paper on

MICRO-ORGANISMS AND THEIR RELATION TO DISEASE,

in which he reviewed the labors of German and other bacteriologists in seeking to discover special germs as the cause of various diseases. While we were not yet in a position to express a definite opinion as to the relation of micro-organisms to disease, the author inclined towards the germ theory.

OBSERVATIONS ON THE RELATION OF BACTERIA TO CERTAIN PUERPERAL INFLAMMATIONS.

Dr. Ernest W. Cushing, of Boston, based his observations on the results of examinations of the bodies of such women as had died from these maladies in the general hospital at Vienna last spring. He called attention to the great difference between the rules governing the obstetrician, his assistants and students, in Berlin and in Vienna, saying that in the first-named city every precaution was taken to avoid both direct infection and the possibility of carrying germs in the hair, clothing, etc., as if there might be germs in the air. In Vienna, although the possibility of their existence in the air was admitted in theory, in practice the assistants and students were allowed to be present at autopsies; obstetric operations and laparotomies were performed before classes without spray, and the chief assistant gave an operative course on the cadaver every afternoon, relying for safety on washing, bathing, and change of clothes.

The results obtained by simply avoiding direct infection on the fingers and instruments were used by Dr. Cushing as an argument that puerperal fever was not an entity the poison of which was carried about by the air, entered by windows, was inhaled by the lungs, etc.; but that such fevers were the result of the invasion and multiplication of bacteria received from infection of the uterus or abraded vagina, as a rule, directly from hands, instruments, or applications. From an examination of the bodies mentioned, it would appear that the most frequent cause of infection was the streptococcus; next the staphylococcus; and, lastly, the bacillus pyogenes fœtidus. The former occurred in chains, not distinguishable from those of erysipelas, the cocci lying in pairs, each pair representing a link. The staphylococcus occurred in bunches like those of grapes. One or more of these were found in all acute cases examined, and were present in the uterine or iliac veins, in pelvic abscesses, in the lungs or joints, and, in fact, wherever metastatic abscess occurred.

Dr. Cushing showed microscopical preparations of these different cocci, and gave illustrative cases. He compared puerperal inflammation to infected wounds, and advised active hopefulness with regard to treatment, which, in order to be successful, should be analogous to that of surgical wounds: prompt removal of decomposing matter, evacuation of pus, cleansing and disinfecting douches, and drainage.

This paper was briefly discussed by Dr. R. Stansbury Sutton and Dr. Henry O. Marcy. Dr. Sutton thought the main object was to secure cleanliness. To do this, he would not employ chemical agents in the abdominal cavity, as, by leading to the risk of poisoning, they were more likely to do harm than good; but we could not omit cleanliness. Tait's success was based upon the fact that he secured perfect cleanliness.

Dr. Marcy thought also that Mr. Tait's success depended upon his ability to secure cleanliness, relying largely upon his wife in caring for the sponges, etc.; but he thought Mr. Tait did the cause of surgery harm and himself injustice in depreciating the importance of antiseptic methods. Success was most likely to be with him who took the greatest pains to carry out to the fullest extent antiseptic precautions, while he who spoke disparagingly of these would be least likely to

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obtain perfect cleanliness, and would meet with failures.

MEDICAL LICENSES AND MEDICAL HONORS.

Dr. Edward Jackson, of Philadelphia, read the paper, and said, "When, one hundred and fourteen years ago, the founders of the University of Pennsylvania and the authorities of King's College, New York, conferred upon six young men the degree of Doctor of Medicine, it meant one thing; when, in this present year, the hundred odd medical colleges of the country conferred upon each of three thousand men and women the degree of Doctor of Medicine, it had come to mean something else.

"So far as State licenses were concerned, they only fixed the minimum amount of knowledge which would be tolerated in a practitioner of medicine: such a license was not honorary. The only good reason for State license was to protect the community from incompetent men. It was doubtful whether any system of State license to pursue a certain calling should be looked upon with much favor; and surely such a license, to be anything but an injury and a hinderance to the advancement of the profession and a delusion and a snare to the laity, should be removed from all possibility of competition, and disinterestedness secured by able and honest examiners and great publicity. The State license should be granted, if at all, directly by State authority. The power should not be delegated to irresponsible competing corporations. Medical honors should be considered of value only when taken in connection with the associations leading to their conferment, or when coming from an institution which had worked its way up to general and popular favor, and which conferred honors only for high professional merit."

A paper entitled "The Physician and his Patient," by Dr. John Devin Kelly, of Utica, New York, and one on "Sketches of Some of the Original Members of the Delaware State Medical Society," by Dr. Lewis P. Bush, of Wilmington, were read by title, which ended the scientific work of the session.

At the close of the business meeting, it was announced that the following officers had been elected for the ensuing year:

President.—Dr. R. Stansbury Sutton, of Pittsburgh.

Vice-Presidents.—Drs. Lewis P. Bush, of Delaware; S. J. Jones, of Illinois; R. L. Sibbet, of Pennsylvania, and F. H. Gerrish, of Maine.

Secretary and Treasurer.—Dr. R. J. Dunglison, of Philadelphia.

Assistant Secretary.—Dr. Charles McIntire, Jr., of Pennsylvania.

Honorary Members.—Drs. Henry H. Smith and S. Weir Mitchell, of Philadelphia.

The next place of meeting will be Pittsburgh, Pennsylvania.

PHILADELPHIA ACADEMY OF SURGERY.

AT a stated meeting held November 2, 1885, D. Hayes Agnew, M.D., President of the Academy, in the chair, Dr. R. J. Levis read a communication entitled

NOTES ON NEW ANTISEPTICS, HYDRONAPHTHOL AND POTASSIO-MERCURIC IODIDE.*

DISCUSSION.

Dr. S. W. Gross: Dr. Levis has made the statement that the potassic mercuric chloride is a far safer germicide than the ordinary mercuric chloride. The solution of one to twelve thousand is really not so much weaker, if we look at it properly. The potassic mercuric chloride is dependent for its activity on the biniodide of mercury. It is a well-established fact that the biniodide of mercury is a far more powerful germicide than is the bichloride. Because we use a weaker solution is no evidence that it is not as strong as the bichloride. I can see no advantage in making the potassic mercuric chloride solution, unless it is to fix the biniodide. In preparing the solution of corrosive sublimate in which we wish to keep gauze, sponges, etc., for a long time, we add to it seven and one-half grains of chemically pure chloride of sodium, with the view of fixing the bichloride so that it will not be converted into calomel. The addition of an equal part of iodide of potassium to the biniodide will fix that salt so that it will not be decomposed. There is therefore really no advantage in it, except to prevent changes in the biniodide.

Hence this is not a new remedy, for the biniodide has been used as a germicide. I do not see any advantage in using a stronger substance in what is apparently a weaker solution. It is, of course, impossible to say anything as regards the constitutional effects, for Dr. Levis has not had sufficient experience to determine whether or not toxic symptoms are produced by this agent. There is no reason why—if the potassic mercuric chloride is used as carelessly as the corrosive sublimate often is—there should not be toxic symptoms produced. If the cases of poisoning with the bichloride of mercury which have been reported are examined, it will be found that the bichloride has been used in unusually large quantities. For example, a one to one-thousand or one to two-thousand solution has constantly been used as a fluid to irrigate the wound during a surgical operation. Again, in psoas and iliac abscess, where a large quantity of the solution has been introduced after the evacuation of the pus, toxic symptoms have arisen. If a little care is exercised, there is no reason why toxic symptoms should arise from any of the mercuric solutions.

In regard to hydronaphthol, I know nothing of it from experience. I, however, know

* See page 126.

that Dr. Fowler has been making experiments with it for years, and, even after the adoption of the mercurial solutions, used saturated compress with naphthaline outside of the corrosive-sublimate dressings to keep the wound enveloped in the vapor of naphthol, according to his statement.

Dr. R. J. Levis: Dr. Gross will bear in mind that with the potassic mercuric chloride there is only one-fifth the amount of mercury used. We know that the mercuric bichloride is an unstable salt in the way in which it is generally used, and for ordinary uses it can hardly be made a stable salt.

Dr. S. W. Gross: It is a stable salt. A solution of corrosive sublimate in water can be kept for a week without any change. To make a stable solution for sponges and dressings, it is better to add chloride of sodium.

Dr. R. J. Levis: I used the term unstable with reference to the mercuric chloride in contact with organic matters. Under such circumstances it is liable to be converted into ordinary calomel.

Dr. S. W. Gross: This is a mistake. Corrosive sublimate does not become unstable in the presence of organic compounds. This has been asserted, but there is no proof of it. If it did undergo this change, why do we have toxic symptoms arising when large quantities of the solution are injected into abscess-cavities?

Dr. J. M. Barton: As regards stability, the mercuric chloride does not seem to undergo any chemical change. At the same time, it undergoes some change when brought in contact with organic matter. If this were not so, a large mass of odorous material could be disinfected with half a grain of corrosive sublimate.

Dr. Charles W. Dulles: It is well known that the salts of mercury in the presence of albumen are apt to be converted into albuminoids, but this does not prevent the constitutional effect of mercury. I believe that this change is not in sufficient quantity to interfere with the antiseptic properties of the substance. The effect of the potassic mercuric chloride in the presence of albumen is somewhat similar. Dr. Oliver, who has made some extensive experiments in regard to albumen in the urine, has found that this potassic mercuric chloride is the most delicate test for albumen.

Dr. S. W. Gross: In corroboration of what Dr. Dulles has said, I would recall the fact that when Lister began the use of corrosive sublimate he employed a solution which was too strong, and found that a certain amount of erythema and vesication was produced. He now procures the serum of the blood of a horse and makes his solution in that way.

Dr. Addinell Hewson: I have had some experience with hydronaphthol, but I have seen it produce irritation, and even such erythema as was alarming. This was a solution of one to two thousand. The effects were produced within twenty-four hours. The patient experienced constant distress from the time of its application.

Dr. R. J. Levis: I have found the one to two-thousand solution almost tasteless. I have placed it in one eye without being conscious of its presence.

Dr. Addinell Hewson: In this case there was a tendency to erythema, and the result undoubtedly proved that the remedy had no effect as a germicide.

Dr. Levis: That is not claimed for it.

Dr. F. H. Gross reported a case of laparotomy.*

A SUTURE FOR THE APPROXIMATION OF DEEP WOUNDS.

Dr. R. J. Levis: I wish to call attention to a suture to be used in place of the buried suture. Every surgeon recognizes the advantages of approximating the surfaces of wounds as conducing to healing. We have all been too much satisfied with approximating simply the edges of wounds, without paying attention to the approximation of the deeper parts. In amputations and in the removal of tumors from such situations as the groin and axilla, large spaces are left which may become filled with blood, serum, or the products of inflammation. Since the introduction of antiseptic surgery, and particularly since the use of animal sutures has been adopted, some surgeons have used what are called buried sutures. These have their disadvantages, and sometimes it is difficult to apply these sutures so as to secure complete approximation.

Some time ago I devised a simple plan of approximating the deeper parts of a wound. Taking an amputation-wound for illustration, to approximate the flaps in this manner I take an ordinary silver wire armed at each end with a straight needle, introduce one of the needles into one flap at the bottom of the wound, and bring it out about half-way between the angle of the wound and the edge of the flap. It is then carried across the wound and through the opposite flap. The second needle is then carried through in the same manner. A figure of 8 is thus formed. When the ends of the wire are drawn upon, the deeper portion of the wound is approximated. The superficial portions of the wire are then carried across the wound and bring the edges together. Superficial sutures are also introduced. I have used this in a number of amputations, and think it particularly applicable to the closure of wounds after the removal of large tumors of the breasts where the axillary glands are also removed. In a case in which I removed the breasts four days ago there is now complete union. I insert as many of these sutures as may be necessary.

* Will appear in the next issue of the *Times*.

I have always used wire, but ligature rendered antiseptic would probably be almost as good.

Dr. J. Ewing Mears: In deep wounds of the axilla, what tissues do you approximate?

Dr. Levis: Fatty tissue, muscular tissue, or whatever may be necessary.

Dr. Addinell Hewson: I have used the suture of Dr. Levis frequently, but I have used it without the addition of superficial sutures. I employ, instead, collodion and gauze. This I find more satisfactory. I have had direct union through a stump without any suppuration whatever, on more occasions than one.

Dr. S. W. Gross: I have seen Dr. Levis apply this suture, and it does approximate wounds in a most excellent manner. It is very easy to get the suture out. It is very desirable to get rid of the presence of any foreign body in the wound. Neuber, the introducer of the decalcified-bone tubes, recognized their inconvenience, as well as the disadvantages of the ordinary rubber drainage-tube. It was he who proposed buried sutures. He also resorted to other means of drainage. In amputation of the breast he occasionally punched holes in the skin to allow free drainage. In removal of axillary tumors he inverted the skin on each side, attaching the anterior portion to the pectoralis major and the posterior to the latissimus dorsi, thus making a funnel-shaped opening through which drainage could be effected.

Dr. T. G. Morton: During last winter, something similar to this was proposed by Dr. Packard at the Pennsylvania Hospital. He suggested the introduction of a long pin across the stump, and then the application of a figure of 8 around, making careful compression. This would answer very much the same purpose.

Dr. R. J. Levis: This suture might be called the duplex suture or the deep crossed suture. I think it would be very suitable in the high operation for stone, the deep portion of the suture including the bladder and the superficial portion, including the superficial tissues.

PIN FOR TREATMENT OF FRACTURE OF THE PATELLA.

Dr. Morton: I wish to exhibit a pin which I have used in the treatment of fractured patella. For a number of years I have been using the ordinary Malgaigne's hooks and the modified Malgaigne's hooks. It occurred to me that if I could pass a steel pin and keep the fragments approximated I should have an easier method than with the hooks. I devised this pin, which has a detachable handle and works as an ordinary Brainard's drill. In the case in which I applied it the pin went through without difficulty. Over the extremities shoulders were applied. The fragments were then not disturbed for three weeks. There was not the slightest irritation. Lead-water and laudanum were kept applied. When the pin was removed, I found under one of the shoulders a small collection of pus. In order to obviate this, I have had a shoulder made which does not come in contact with the skin at a right angle. To avoid the possibility of pulling any pus into the bone when removing the pin, I have made it in two pieces, united in the middle with a screw. When it is desired to remove the pin, the parts are unscrewed and the two pieces removed. I have had less trouble with this than with any other method of treating fractured patella.

In introducing the pin I did not employ any anæsthetic, and the patient made no complaint. The whole manipulation did not occupy over fifteen seconds. It is impossible to apply Malgaigne's hooks without an anæsthetic. I was surprised at the ease with which the pin passed through the bone. It met with no more resistance than it would in going through a hard Boston cracker.

I was unable to apply the pin until thirteen days after the fracture, on account of the effusion within the joint. I have never put on the hooks until all local irritation has subsided.

In this case I do not think that there is bony union. I have never seen bony union where there has necessarily been delay, but there is here exceedingly close union.

Dr. William W. Keen reported a case of

OBSTRUCTIVE JAUNDICE—CHOLECYSTOTOMY FOR IMPACTED GALL-STONES.*

DISCUSSION.

Dr. William Hunt: What has been the success following this operation?

Dr. Keen: I have not had time to gather the cases together; but when I prepared my paper last year there were thirty-eight cases, with eight deaths.

Dr. S. W. Gross: The percentage of deaths after cholecystotomy is eighteen. The percentage of deaths is far greater than after removal of the gall-bladder, or cholecystectomy.

Dr. J. Ewing Mears: This case serves to confirm what every one who has had anything to do with abdominal surgery believes,—that it is frequently impossible to tell what will be found in the abdomen before it is opened. This case was carefully examined before operation, and what was supposed to be the gall-bladder was outlined; but, when the abdomen was opened, this proved to be the left lobe of the liver. This may be regarded as one of the most obscure cases of cholecystotomy that has yet been performed. In the reported cases there has been no difficulty in locating the position of the gall-bladder.

Dr. W. W. Keen: In the three prior operations which I had done, there was no difficulty in finding the gall-bladder.

DEFORMITY OF THE UPPER EXTREMITIES.

Dr. W. W. Keen: I have here a patient with a deformity of the upper extremities,

* See page 123.

which I suppose is due to rickets. Precisely similar conditions I have never before seen. This girl is in her fifteenth year, a mulatto, tall and rather slender for her years. One year ago she began menstruating, and at the same time noticed the commencement of the changes which are now most distinct in the right wrist. There is also marked angular deformity at the elbow. Feeling the olecranon process, there is found considerable relaxation of the ligaments, allowing the ulna to be moved in different directions. In the wrist there is apparently no mechanism which would account for the deformity present. The deformity of the left wrist can, with the exercise of considerable force, be reduced. I would call attention to the ease with which the deformity of the elbow would be overlooked. When the hands are pronated it is not seen: it is observed only in supination. The other bones of the body are free from evidences of rachitis. There is no trouble about the head, no beading of the ribs or enlargement at the ankles. There is no evidence of inherited specific disease: the father died of consumption, the mother is living and perfectly healthy. There is no evidence of specific disease to be found in the condition of the teeth.

Dr. Charles W. Dulles: Would this not be more properly called a case of osteomalacia? Rickets is an affection of the bones in the progress of their growth. Osteomalacia is the term applied to the condition in which bones, having attained their proper development, undergo softening.

Dr. Keen: The bones are not curved to any extent, and in no other bone is there a tendency to softening.

Dr. R. J. Levis: My opinion is that the case is really a neurosis. I look on it as a paralytic condition rather than a true bone-affection. It is analogous to some forms of club-foot, and particularly to knock-knee and the like, which, we know, occur from irregular muscular action.

Dr. W. W. Keen: I cannot understand how this condition could be due to muscular action, either paralysis or contracture. There is no evidence of such a condition. No muscle is tight, and no muscle springs into relief at any point. The muscles seem to act properly, and the trouble appears to be in the bony system. In consequence of the change in obliquity, the muscles which go across as chords of the arc tend to increase the deformity.

My attention has been drawn to the diminished size of the head of the radius. This might have something to do with the deformity at the elbow, but it could have nothing to do with the condition of the wrist.

Dr. William Pancoast: I noticed that, on pressing the radius firmly against the ulna, a grating could be produced. This was elicited only on firm pressure.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, OCTOBER 1, 1885.

The President, B. F. BAER, M.D., in the chair.

DR. WHARTON SINKLER read a paper on

THE DIFFERENT FORMS OF PARALYSIS MET WITH IN YOUNG CHILDREN.

The most frequently met form is infantile paralysis, or *polio-myelitis anterior*. This term indicates the pathology of the disease, which is an inflammation of the nerve-cells of the anterior horns of white matter of the spinal cord. This affection may come on at any period of life, but is generally seen in children, and usually at the age of two years. The children are generally strong, and apparently healthy, and the paralysis is sudden in its onset. Fully two-thirds of the cases I have seen have been attacked in the summer months, hot weather and teething seeming to be predisposing agents. Dr. Barton, of Manchester, England, reports that of fifty-three cases in which he noted the time of onset, twenty-seven occurred in July and August. The attack is preceded by fever of greater or less intensity, with pain in the head and limbs, with general soreness when moved or lifted. After a few days, paralysis, more or less complete, occurs; but subsequently a regression of the paralysis from some of the affected parts occurs. Sensation is undisturbed. Atrophy of the muscles is soon apparent; in fact, the paralyzed portion stops growing for a time. The temperature of the affected portion is low, and the skin is blue and mottled, but there is no tendency to ulceration, and wounds or scratches heal readily. The skin and tendon reflexes are lowered or abolished in the affected limbs. At first response to the faradic current is lost, and later on the galvanic current produces but little muscular contraction, except when a powerful current is used. When atrophy has set in, the reaction of degeneration is seen. Most of the cases of club-foot are the result of infantile palsy. Deformities of the upper extremities are rare, this disease differing in this respect from cerebral palsies. The exact causes of infantile palsy are unknown. Over-fatigue often precedes an attack; sudden chilling is considered by Seguin to be a frequent cause.

The *prognosis* as to perfect recovery is only moderately good. In many cases the most faithful treatment fails to restore the paralyzed muscles, but in almost every case we can expect more or less improvement.

In the early stages of the paralysis, after the subsidence of the fever, the treatment should consist of mild stimulation to the spine; ergot and small doses of bromide of potassium should be given internally. Later in the disease, iodide of potassium should be given instead

of the bromide. When the palsy is established, electricity and massage are the means to be depended upon. They must be persisted in for months, or even for years. Internal treatment is of little or no value unless there is some failure in the general health of the child.

Spasmodic paralysis, as seen in children, is of two varieties: when of primary spinal origin, and when there is a descending degeneration of the cord from a primary cerebral lesion. Sometimes there seems to be a congenital defect in the motor tracts of both brain and cord. In the spinal variety there is often seen, soon after birth, rigidity of the limbs. At first this is only occasional, but as the child gets older every effort to move a limb causes muscular rigidity in it. The child does not attempt to walk until three or four years of age. Then, when it is supported under the arms, and it tries to stand or to walk, the movements are very peculiar and characteristic. The feet are extended and inverted, so that the child rests on the toes. The knees are strongly adducted and lock together, so that the legs become entangled. By degrees the child becomes able to walk with the aid of apparatus or some form of crutch. The hands and arms are often affected, and every effort causes muscular rigidity to come on. The mind is unaffected in these cases, and the speech may be distinct, although it is often very defective. Sensation is unimpaired, and the patella reflex and ankle clonus are exaggerated. There is no wasting of the muscles. By these symptoms we infer that the disease is localized in the lateral columns; but exactly what is the nature of the lesion we do not know, for no post-mortem examinations have been made in these cases. The cause is unknown. Hamilton found three of seven cases which he had collected were premature births. Adherent and contracted prepuce has been thought by some to be caused by reflex influence of the spasmodic paralysis, but operation has not given relief. The treatment should consist of massage, galvanism to the spine, ergot, and cod-liver oil. Fluid extract of conium may be given to allay spasm. In some cases great improvement follows this treatment. Even when we can do no positive good to the limbs, very much can be effected by the aid of apparatus. Properly-adjusted braces to the legs will enable a child to walk on crutches or in a Darrach wheel-crutch.

There is a form of spasmodic spinal paralysis in which the child is imbecile. In these cases there has probably been congenital defect in cerebral development. The head is small, and there is no evidence of intellect; often nystagmus is present.

Paralysis from Pott's Disease.—Paralysis of the lower extremities may result from caries of the spine. The lesion may be either a meningitis or a myelitis. If meningitis alone, there is considerable pain and contraction of the legs. Generally there is a transverse myelitis. The symptoms are numbness and pricking of the legs, with loss of sensation; gradually-increasing loss of power, with wasting of the muscles; incontinence of fæces, with retention or incontinence of urine. Sometimes there are ulcers over the sacrum or on the limbs.

The indications for treatment are evident. An apparatus which will take the weight of the body from the spine is necessary, and is sometimes sufficient of itself. Frequently, however, the application of the actual cautery over the spine brings improvement in the symptoms when an apparatus has done no good. Massage and electricity should be used to restore the atrophied muscles.

Paralysis from rachitis and diphtheria is seldom complete. The former is often spoken of as the pseudo-palsy of rickets. Negro children, who are very subject to rachitis in cities, often have rachitic paralysis. The child at three or four years is unable to walk or stand. Sometimes it has not sufficient muscular development to sit upright. It can move every limb, and has no loss of sensation, but has no power. Cod-liver oil and massage bring about the most satisfactory results in these cases. *Diphtheritic paralysis* usually begins in the muscles of the soft palate and pharynx, and extends to the extremities. It is generally bilateral and incomplete, but I have seen a case in which it was hemiplegic. It is considered peripheral in character, and is believed by some to be connected with the altered condition of the blood consequent on the original attack. Diphtheritic paralysis is rarely fatal, and lasts in most cases only a few weeks, although it may continue for months. Strychnine and electricity are the means to be employed, and the case usually responds promptly to these remedies.

Pseudo-hypertrophic paralysis is a rare affection, but is of much interest. The disease belongs almost exclusively to infancy. It is characterized by muscular paralysis, with great increase in the bulk of the muscles. This enlargement is due to fatty deposit, while the muscular tissue proper is atrophied. The affection begins with weakness of the legs, a peculiar balancing of the trunk, and separation of the legs in walking. The shoulders are thrown far back in standing and walking. There is great difficulty in getting from the sitting to a standing position. Later in the disease the muscles become wasted and shrunken, and the general health begins to suffer. Death results from implication of the respiratory muscles. The skin is mottled like a piece of Castile soap. The tendon reflexes are abolished, and electro-muscular contractility is impaired. There is often a greater or less amount of mental weakness. There is no loss of power over the bladder and rectum, and sensation is not affected. Heredity in-

fluences the disease, which is slow in its progress, but the course is steadily downward.

Friedreich's disease is still more rare than the preceding. It is practically locomotor ataxia in childhood. There is evidenced here also a hereditary predisposition, and female children seem most liable.

Cerebral Palsies.—Hemiplegia may result from some injury at the time of birth, either from the forceps or from the pressure of a prolonged labor. A child may be born hemiplegic after a perfectly natural and easy labor. Under these circumstances we must regard the paralysis as the result of imperfect cerebral development. Hemiplegia under these circumstances is generally permanent. The side affected grows less rapidly than the other. The flexors of the arm and hand are usually contracted. The leg becomes rigid in the act of walking.

Convulsion is almost always associated with cerebral paralysis, either immediately preceding the attack or occurring soon after. The convulsive movements are most violent on the side which is subsequently paralyzed. The child will have an idiotic expression and speak indistinctly, but its friends think it intelligent. The convulsions are liable to return when the child is older, and then assume an epileptic form. The walk is peculiar, and is called the *spastic* gait. The patient plods along looking as if he were about to pitch forward. The affected limbs are smaller and shorter, the growth of both bone and muscle being affected. In the choreic variety, where the arm is in constant motion, the muscles may become hypertrophied, but the bone remains short.

Prognosis.—As a rule, the prospect of recovery is bad: even if the patient gets well, the hemiplegic side remains awkward.

Treatment.—Cod-liver oil and massage, which always relaxes the contracted muscles. The affected limbs should be used as much as possible.*

Dr. HARRIS inquired if Dr. Sinkler had ever observed any hereditary predisposition to convulsions and cerebral paralysis.

Dr. SINKLER replied that the hereditary influence was decided even when no convulsions occurred.

CÆSAREAN SECTION.

Dr. R. P. HARRIS read a report of the autopsy upon Mrs. R., from whom two living children had been removed by Cæsarean section by Professor Gibson, of the University of Pennsylvania. The superior strait was reniform; conjugate diameter one and three-quarter inches, transverse diameter five and one-quarter inches. The malformation was due to rachitis and injury from a fall in her second year. A full report of the history of the patient, the operations, and the autopsy, can be found in the *American Journal of the Medical Sciences*, October, 1855, p. 422.

* The paper, with illustrative cases and details of treatment, will be published in full in the *Archives of Pediatrics*.

OÖPHORECTOMY.

Dr. E. E. MONTGOMERY reported the following case. Mrs. L., of Columbia, Pennsylvania, æt. 36 years, married ten years, pregnant five times, the last four years ago, was brought to my notice by Dr. H. T. Chase. Her health has been bad since her last confinement. First menstruation at twelve and a half years, regular and very free for one and a half years, when she fell, producing pelvic distress, after which for seven years the flow was very scanty, lasting but one or two days, and accompanied by excruciating pain. She improved somewhat after marriage. Her first conception was followed by so much nausea, vomiting, and anæmia that her physician advised and induced an abortion.

She is now regular as to time, but irregular as to quantity. It is preceded by an excruciating pain for two days, which continues until the flow disappears. She also has severe pain in the head. She is very nervous at all times, but this is much intensified during the period. Pain is more marked in the left inguinal region and down the corresponding limb. Coition and vaginal examination are very painful. The uterus is enlarged and painful, tender on pressure over both ovaries. Local uterine treatment had been kept up during the entire four years with no relief. Trachelorrhaphy had been performed; ovariotomy was advised. September 19, 1885, she entered my private hospital, and, assisted by Drs. W. H. and C. B. Warder and E. Eshleman, the uterine appendages were removed. The left ovary was composed of a number of cysts, the largest of which ruptured while adhesions were being separated. The right ovary was not enlarged, but it was removed to insure relief. The wound was closed with silk-gut, and dressed with sublimated gauze and absorbent cotton. There was no shock. The highest temperature reached was 101.6° at midnight of the 20th, and it became normal on the 22d. Sutures were removed on the eighth day, and the wound re-dressed for the first time. It had united throughout, and there was no irritation from the sutures. The effect upon her general health remains to be determined.

Dr. MONTGOMERY also reported a case of

SUPRA-VAGINAL REMOVAL OF THE UTERUS AND BOTH OVARIES FOR FIBROID TUMOR.

Ann U., æt. 27, was brought to me by Dr. T. H. Boysen, of Egg Harbor City, with the following history. Her menses from the beginning occurred every three weeks, and were free an entire week. During the last four years they have occurred every two weeks, and are attended with pain in the pelvis and down the limbs, and severe pressure upon the

bladder, causing frequent urination, and several times necessitating the use of the catheter. Dr. Boysen had diagnosticated fibroid tumor, which my subsequent examination confirmed. The tumor was the size of a child's head, filling up the pelvis, and apparently arising from the anterior wall. The examination led me to believe that the bladder was adherent over the anterior surface, and would render the removal of the tumor unsafe. I suggested the removal of the ovaries. She entered my private hospital September 15, 1885, for that purpose. Drs. W. H. Warder, Boysen, and Martin assisted; Drs. C. B. Warder and Stultweather present. An incision three inches long was made, and finding the tumor free from the bladder, with cervix sufficiently long to serve for a pedicle, the incision was extended to within an inch of the umbilicus above and symphysis below, and the tumor with some difficulty withdrawn. In the absence of a Tait's clamp, which had been ordered some days before, the pedicle was constricted by a wire écraseur, and the tumor, with the ovaries, was removed. The pedicle was then transfixed with two steel pins, and tied in three sections with strong silk thread. The peritoneum was fastened to the pedicle below the ligatures, and the wound closed with silk-gut sutures, the pins holding the stump outside. The wound was dressed with sublimated gauze and absorbent cotton. The operation was followed by some shock,—temperature 97.4°, pulse 104,—from which she soon rallied. She complained greatly of pain. A half-grain of morphine had been given by suppository, and three hypodermic injections of morphia, one-quarter grain each, were given during the afternoon before the pain was relieved.

At 3 A.M. of the 24th I was called by the nurse, who reported bleeding from the stump. Three ounces of blood had been lost. By aid of Dr. Warder a Wells's clamp was applied below the pins, apparently controlling the hemorrhage; but it recurred later in the day from the angles and from beneath the clamp. By this time the Tait's clamp had arrived, and the patient was etherized, the lower three sutures removed, the pedicle drawn up, the clamp applied so as to control it completely, and the wound again closed. The wound had united throughout. Temperature reached 100.6° at 9.30 P.M. The highest subsequently, 101.6°, was in the afternoon of the 25th, and it became normal on the 28th. Upon removing the dressings on the 27th, some pus welled up about the pedicle. As the skin was irritated, the dead pedicle was cut away until the clamp slipped off. There resulted, of course, considerable retraction of the stump, but the sloughed tissue is now nearly cleared away. The patient suffers no pain or discomfort; temperature normal. The tumor was situated in the anterior wall and fundus uteri, and projected into the uterine cavity.

Dr. PARISH remarked that removal of the ovaries had given such good results in cases of uterine fibroids, and was comparatively so free from danger, that he would like to hear from Dr. Montgomery his reason for his choice of operation.

Dr. MONTGOMERY replied that the tumor filled the pelvis and pressed upon the bladder and rectum, causing great and constant distress. As diminution of the size of the fibroid tumor is not a certain result of oöphorectomy, and as all the circumstances were in favor of the major operation, he decided upon it as the best one.

W. H. H. GITHENS,
Secretary.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held October 28, 1885, the President, JOHN A. WYETH, M.D., in the chair.

The Committee on Microscopy reported on the specimen of exfoliative catarrh of the bladder presented by Dr. Boldt at the last meeting. So far as could be determined with the specimen in its present condition, it could not be regarded as a cast of the urinary bladder in the sense it was supposed to be by Dr. Boldt: it only contained a part of the superficial layer, and its thickness was due to new deposit with œdematous infiltration.

Dr. W. M. CARPENTER presented two specimens for candidates. The first was a primary ulcer of the duodenum, situated within half an inch of the pyloric orifice, one and one-half inches by one inch in size; there was no perforation of the intestine, but peritoneal adhesions surrounded the ulcer.

CARCINOMATOUS ENLARGEMENT OF THE LIVER AND CANCEROUS DEPOSITS IN VARIOUS ORGANS OF THE BODY OF A GIRL AGED THIRTEEN YEARS.

The second specimen consisted of the greatly-enlarged liver from cancerous nodules, and was removed from the body of a girl aged 13 years and 6 months. There were also nodules in almost all of the organs of the body where such deposits usually occurred. Her father had died of phthisis; two cousins of her grandfather were believed to have had cancer of the breast. The child had always been considered very healthy. A year ago she was in vigorous health, and weighed eighty pounds. About the middle of August last she began to complain of feeling tired, lost color, and became listless. At first she had no pain, but later would cry out with pain in the region of the spleen. Her appetite became ravenous, and she ate with special pleasure things acid. Enlargement of the abdomen was first noticed on the 8th of September, and from that time there was rapid increase in the region of the liver. Death

occurred in October. The liver weighed twenty pounds, and contained cancerous nodules of various sizes: the lungs were about the only organs free from cancerous infiltration.

The specimen was referred to the Microscopical Committee for examination.

Dr. LOUIS WALDSTEIN also presented a specimen for a candidate, consisting of the first phalanx of the great toe, the seat of a semi-malignant tumor following an injury. The disease showed some signs of becoming actively malignant.

FIBRO-MYOMA OF THE UTERUS.

Dr. H. MARION SIMS presented a round tumor of the uterus the size of a child's head. The patient had been married eighteen years, had had one child some years ago, had menstruated regularly and had been in remarkably good health until three years ago, at which time she began to suffer from heavy, dragging pains, and also from darting pains in the iliac regions. She consulted him in October, when the uterus was four inches in depth; a movable tumor was felt, which was believed to be a uterine fibroid. The patient was very fat, and the abdominal incision had to be increased to nine inches in order to extract the growth. The patient rallied well from the operation, and did well, but on the third day complained of oppression about the stomach and vomited a quantity of black fluid, evidently from reverse peristaltic action in the intestines. It would seem that some of this material entered the air-passages and the patient died suddenly from suffocation.

The autopsical examination was limited to the abdominal cavity; the wound was in good condition; there were no signs of suppuration.

Dr. Sims also exhibited two vulcanized plates with grooves upon which the skewers could rest and not cut into the abdominal integument.

Dr. J. B. HUNTER had had like trouble with the skewers, for the prevention of which he had had flat buttons put on the ends of the skewers; but the plates shown were preferable, being larger. R. C. S.

PILOCARPINE IN ERYSIPELAS.—The treatment of erysipelas introduced by Prof. Da Costa, by the administration of jaborandi or pilocarpine, has been employed by others with similarly successful results. Dr. Charles W. Rook, of Quincy, Illinois (in a contribution to the *Medical and Surgical Reporter*), reports two cases of facial erysipelas treated with fluid extract of jaborandi (gtt. xxx every half-hour for five hours), followed by tonic doses of iron and quinine. In one case vomiting was produced, which was attributed to swallowing the salivary secretion.

REVIEWS AND BOOK NOTICES.

MOISTURE AND DRYNESS; OR, THE ANALYSIS OF ATMOSPHERIC HUMIDITIES IN THE UNITED STATES. An Essay read before the American Climatological Association (1884), and including the Presentation of a Rule of Moisture and Dryness by which the Climate is evenly divided, etc. By CHARLES DENISON, A.M., M.D. Chicago. 1885. 8vo, pp. 30.

The value of Colorado as a sanitarium is demonstrated by this study of comparative humidity of the air in different portions of the United States, which is accompanied by weather-maps prepared by the Signal Service of the War Department. The essay is based upon the proposition that "an actually small amount of atmospheric moisture is the most important element in the best climate for phthisis." Equability, so long the desideratum, is shown to be illusory and injurious, and the author contends with much vigor for coldness, variability, and stimulation, as against their opposites, warmth, equability, and enervation. The influence of various factors in producing atmospheric dryness or the reverse is considered, and localities similar in other respects are shown to be favorable to the invalid in proportion to their dryness; and, as cold favors the elimination of carbonic acid, the conclusion is reached that altitude and distance from the sea are of great value in a health-resort for consumptives.

RATIONALISM IN MEDICAL TREATMENT; OR, THE RESTORATION OF CHEMISM. BY WILLIAM THORNTON. Boston, published by the Author. 1885.

This brochure is dedicated appropriately to those who think and reason. Restored chemism, in the language of the author, "means the re-establishment of the normal relative position of the atom, which brings about the chemical and physical integrity of the body, as the human system can be made to respond to chemical action, if understood, as easily as the crank of an instrument responds to the touch of the musician." If, as he asserts, rationalism in medicine requires the throwing aside of two-thirds of our materia medica, we hail its champion, and hope that he will not set his lance at rest until he has demolished every therapeutic windmill.

A TEXT-BOOK OF NURSING. For the Use of Training-Schools, Families, and Private Students. Compiled by CLARA S. WEEKS, Superintendent of Training-School for Nurses, Paterson, New Jersey, etc. New York, D. Appleton & Co. Cloth, 12mo, pp. 396.

This book, in twenty-three chapters, communicates a large quantity of useful information in a form intelligible to the public. It is

well written, remarkably correct, sufficiently illustrated, and handsomely printed. The amount of technical skill and knowledge required of nurses at the present day makes the use of some text-book indispensable. To those who need such a work we can speak approvingly of its design, scope, and execution.

THE PEDIGREE OF DISEASE. Being Six Lectures on Temperament, Idiosyncrasy, and Diathesis, delivered in the Theatre of the Royal College of Surgeons at the Session of 1881. By JONATHAN HUTCHINSON, F.R.S. New York, William Wood & Co. 1885. Cloth, 8vo, pp. 113.

These lectures have already appeared in the medical journals, but the profession will welcome them in this permanent and more acceptable form.

NEW REMEDIES AND CLINICAL NOTES.

THE SURGICAL TREATMENT OF CYSTS OF THE PANCREAS.—Of all abdominal organs, the pancreas has been least frequently subjected to surgical treatment, for which the anatomical location of this organ and the obscurity of its affections furnish a sufficiently satisfactory explanation. Situated high up in the abdominal cavity, and hidden behind such important organs as the stomach, omentum, and transverse colon, it is the least accessible of all the abdominal organs, and on this account its affections, wrapped in obscurity, have for the most part constituted objects for empirical medication. The relation of this gland to the surrounding organs, and its great distance from the anterior wall of the abdomen, the only point of approach, necessarily offer serious obstacles to diagnosis and direct treatment. From a diagnostic point of view, another great difficulty is our want of positive knowledge concerning the physiological functions performed by this gland in the process of digestion. As the symptomatology of all affections of the pancreas is always obscure, and a probable diagnosis can be made only in cases where the gland has become considerably enlarged by disease, it is apparent that our present clinical knowledge is limited to diseases which increase the size of the organ to a sufficient extent to permit its detection by palpation. Primary malignant disease of the pancreas, when it has advanced to such an extent that its presence can be diagnosticated with certainty by physical signs, will have invaded the adjacent tissues to such a degree as to preclude the advisability of an operation. Consequently, the efforts of the surgeon, for the present at least, must be directed exclusively towards the recognition and treatment of benign affections of this gland. Clinical experience does not extend beyond an imperfect knowledge of cysts of the pancreas.

The pancreas, like other secretory organs, is prone to become the seat of cystic tumors, the result of obliteration or obstruction of the common duct or one or more of its branches. Cysts originating in this manner are true retention-cysts, containing the physiological secretion from the distal portion of the gland-tissue, with perhaps accidental products, such as altered secretions, blood, and the products of inflammation.

In a very valuable paper on the surgical treatment of cysts of the pancreas, Dr. N. Senn, of Milwaukee, in the July number of the *American Journal of the Medical Sciences*, presented a full report of a case of retention-cyst of the pancreas which had recently come under his observation, and at the same time summarized in a compact form the clinical history of similar recorded cases, which serve as a basis for some general remarks.

In recapitulation, Dr. Senn submits the following conclusions:

1. Cysts of the pancreas are true retention-cysts.

2. Cicatricial contraction or obliteration of the common duct or its branches, and impacted calculi, are the most frequent causes of cysts of the pancreas.

3. A positive diagnosis of a cyst of the pancreas is impossible; a probable diagnosis between it and some other kind of cyst amenable to the same surgical treatment is adequate for all practical purposes.

4. The formation of a pancreatic fistula under antiseptic precautions commends itself as the safest and most expedient operation in the treatment of cysts of the pancreas.

INOCULATION FOR HYDROPHOBIA. — M. Pasteur has communicated to the Academy of Medicine and the Academy of Sciences the results of his latest experiments upon the prophylaxis and cure of rabies, together with the account of a case observed in the human subject. M. Pasteur now adopts the following method: A rabbit is inoculated with a fragment of the spinal cord of a mad dog; the animal is affected with hydrophobia in the space of about one fortnight. A portion of its spinal cord is employed to inoculate a second rabbit, which also contracts the disease, but more rapidly; the spinal cord of this second rabbit serves to inoculate a third, and so on. It is observed that at each step of this process the intensity of the disease becomes greater and the period of incubation shorter. When the spinal cord of these animals which have died of hydrophobia is suspended in a perfectly dry tube, its virulence diminishes by degrees, and at last disappears. A collection of these spinal cords —some of them entirely stale and powerless, others more fresh and active, others again

quite fresh and extremely active—is always kept in readiness. To render a dog insusceptible of rabies, he is first inoculated with the stale and powerless specimens, then with fresher and more active ones, and lastly with the most powerful of all, when he becomes quite proof against the inoculation of rabies. Lately, a young boy, 9 years of age, Joseph Meister, was brought by his friends to M. Pasteur's laboratory. He had been most severely lacerated by a mad dog, having fourteen bites in different parts of his body. M. Pasteur, in presence of the almost absolute certainty of death, inoculated the child according to his system: the first inoculation was made with a spinal cord fifteen days old on the 6th of July, sixty hours after the child had been bitten. Similar inoculations with virus of constantly increasing intensity were made up to the 16th of July, when the spinal cord employed was quite fresh. The child, having up to the present time, four months after the accident, exhibited no symptoms of hydrophobia, is considered radically cured by M. Pasteur, and he has already recommenced the same method of treatment upon a young shepherd, who, in defending other boys, was cruelly bitten by a mad dog, which he killed upon the spot. The results of this new experiment will be communicated by M. Pasteur in due time to the Academy. With respect to the first patient, it must be remembered: 1. That sixty per cent. of people bitten by mad dogs do not contract hydrophobia. 2. That the incubation of the disease is sometimes extremely long (cases have been known to occur two years after the bite). The experiment is not, therefore, absolutely conclusive, although it marks a great progress in the history of the disease, and justifies in some measure the enthusiastic applause with which the communication was received.—*Medical Times and Gazette.*

PILOCARPINE THE ANTIDOTE TO DATURINE.—A Hungarian physician, being called to a child of four who was in a comatose condition from having eaten, as her playfellows said, two handfuls of the ripe berries of the thorn-apple (*Datura Stramonium*), and in whose vomit the berries could be plainly detected, gave pilocarpine hypodermically, thinking that, as that had proved successful in atropine-poisoning, it ought to be useful in datura-poisoning also. He began with the fourteenth of a grain, and, as no effect was produced, he increased the dose to a seventh. As improvement was now evident, this was repeated. Altogether in five hours he gave six-sevenths of a grain, and by that time the child was convalescent. No physiological symptoms of pilocarpine were produced until the last dose was given, which was followed by profuse secretion of saliva and perspiration. The author therefore concludes that five-sevenths of a grain of pilocarpine had been required to neutralize the daturine, its own physiological action not coming into play until that was completely effected. He thinks that this case sufficiently demonstrates that pilocarpine is antidotal to daturine.—*Medical Times and Gazette.*

A NEW CANCER-CURE.—The *Euphorbia heterodoxa*, a native of Brazil, possesses a resinous active principle, contained chiefly in the juice, which exerts a peculiar destructive action upon certain neoplasms. Dr. Landowski, at the recent French Congress at Grenoble, called attention to the fact that the juice of this plant had the reputation among the natives of curing cancer. He had experimented with it in chancroids, epitheliomata, syphilitic vegetations, and had found it to possess a powerful escharotic effect, with a dissolving action upon organic tissues, resembling a combination of a powerful caustic with papaine. The remedy is applied with a brush, and the tumor dressed with vaseline containing boric acid. Dr. M. de Santa Cruz has found that the resin possesses the same properties as the juice, and is permanent, while the juice quickly deteriorates.

IN trigeminal neuralgia, two-thirds of a grain of salicylate of cocaine, injected into the most painful spot and repeated several times, has been found curative by Dr. M. Schneider.

ANTIPYRIN may be given in syrup of raspberries, syrup of lemon, simple elixir, compound elixir of taraxacum.

MISCELLANY.

AT the stated meeting of the Medical Jurisprudence Society held on the 10th instant, at the Hall of the College of Physicians, Dr. John H. Packard and Thomas W. Barlow, Esq., jointly presented a paper on "The Extension of Privilege to Communications between Physician and Patient." Several new members were received.

NOTES AND QUERIES.

THE EXTERNAL APPLICATION OF THE TINCTURE OF BELLADONNA IN RETENTION OF URINE.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

A short time ago I was hurriedly summoned to see a little boy who was suffering much from retention of urine, brought about by a kick, by another boy, received on the perineum just over the prostatic portion of the urethra, producing not only paralysis of the muscles of that part, but also enlargement of the prostate gland, with stricture and retention of urine, and all efforts at urination were futile. For three days this state of affairs

had continued without any relief, but all the while getting worse, notwithstanding all the efforts which had been made to relieve him. The case was now one of critical importance, as life depended upon a speedy relief. I at once ordered a warm hip-bath for ten minutes, hoping at the end of it to be able to pass a small-sized catheter, but signally failed. Then I applied the tincture of belladonna over the *lower part* of the abdomen and perineum, hoping to relax the muscular contraction. At the end of another ten minutes I made a second attempt to pass the catheter, which I succeeded in doing, as there flowed a few drops of bloody urine. Feeling satisfied at the success, and knowing that I had broken the way and relieved the stricture, I desisted from the further use of the instrument, fearing that I might do some harm and thereby increase the trouble. I ordered the patient to be wrapped in warm blankets and put to bed, giving him one grain of opium and a half-grain pulv. ipecac every hour until he slept soundly, occasionally bathing the perineum with the tincture of belladonna. He fell into pleasant sleep, and at the end of five hours awakened and passed one quart of urine, and that without trouble. The relief was permanent. The treatment was continued for a few days, and the patient was well. As an evidence of the fact, he has been playing around the streets every day since. J. A. H.

Milton, Del., October 31, 1885.

COCA-LEAF CHEROOTS.

To the Editor of the Phila. Medical Times:

Dear Sir,—I have received such a flood of letters in relation to coca-leaf cigars and cigarettes from all parts of the United States, since my article on this subject in your issue of October 19, that I feel sure the following letter from Messrs. Parke, Davis & Co., of Detroit, will be of interest to your readers. The letter is addressed to myself, and says,—

"Referring to your article on 'Coca-Leaf Cigars and Cigarettes' published in the *Medical Times* (October 19, 1885), we beg leave to call your attention to the enclosed samples of coca-cheroots, which we have had made to meet the extensive demand you have created. A cheroot can be manufactured much cheaper than a cigar, and will of course retail at a lower price in proportion. Though containing about the same amount of coca as the cigar you sent us, the cheroot will retail at five cents apiece instead of ten cents apiece, which, we believe, is the price you quoted for the cigars.

"Please tell your medical friends that we would be happy to send samples to those who desire to try them."

In relation to the above letter, it seems to me that the cheroot fills every indication for the cigar, and I take pleasure in referring the profession to this well-known house, who will supply them with the very best quality of cheroot containing carefully-selected coca. As they are large importers of the drug, they have every opportunity of doing so.

But let me say at this time that it is my earnest desire to secure a very general expression of opinion concerning the use of coca in this form from the profession, and at an early date; and it would afford me great satisfaction to receive reports of trials, whether the results are favorable or otherwise; also to receive suggestions pertaining to the subject in any form.

Very truly yours,
F. E. Stewart.

Lock-box 248.

OBITUARY.

George Hamilton, M.D., died of apoplexy at his residence, in Philadelphia, October 30, 1885. Dr. Hamilton was born in this city in 1808, and was graduated in 1831 from the medical department of the University of Pennsylvania. He passed the most active part of his professional life as a country physician near Philadelphia, but for many years has led a retired life. He was an active member of the County Medical Society, of which he was elected President in 1868, and also a prominent member of the College of Physicians, to whose Proceedings he occasionally contributed. He wrote a memoir of his friend, the late Prof. J. A. Meigs, which he read before the State Medical Society. Of late years he took much interest in the question of the prevention of abuses in connection with the practice of vivisection.

A severe and sudden bereavement, the death by burning of a favorite daughter and a grandson by the burning of their residence on Pine Street last winter, undermined his health and strength. Owing to his temperate and regulated life, he was enabled to lead an active existence, although he was naturally rather delicate. He enjoyed full possession of his faculties up to the last day, and had just returned from church on Sunday morning when he was stricken. His wife, a daughter, and a son (who is a well-known artist) survive him.

J. A. Armstrong, M.D., a prominent physician of Camden, inspector of the State Board of Health for the counties of Camden, Gloucester, and Cumberland, died with cerebral apoplexy at his home, October 28, 1885. He was fifty years of age, was a member of several scientific societies, and at one time was coroner.

Samuel G. Armor, M.D., Dean of the Faculty of the Long Island College Hospital, and Professor of Practice in that institution, died of bronchitis October 28, 1885. He was a man of superior attainments, and was formerly a professor in the University of Michigan. He was an able writer and observer, and was not only eminent in his profession, but also was endeared to a large circle of friends by his agreeable manners and his sterling traits of character.

A. J. McKelway, M.D., late surgeon of the Eighth Regiment New Jersey Volunteers, died on Saturday, November 7, 1885, at his home, Williamstown, New Jersey, in the seventy-second year of his age. He was the father of Mr. George I. McKelway, a leading druggist of this city.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM OCTOBER 25, 1885, TO NOVEMBER 7, 1885.

Major Ely McClellan, Surgeon.—Leave of absence granted in orders, Cavalry Depot, Jefferson Barracks, Missouri, October 30, is extended seven days. S. O. 254, A. G. O., November 4, 1885.

Major D. L. Huntington, Surgeon.—Detailed on Board to inspect Army and Navy Hospital buildings at Hot Springs, Arkansas. S. O. 245, A. G. O., October 24, 1885.

Major Henry McEldery, Surgeon.—Granted leave of absence for four months from November 1, 1885. S. O. 246, A. G. O., October 26, 1885.

Captain J. H. Patzki, Assistant-Surgeon.—Appointed member of Board to meet at Forts Jackson and St. Philip, Louisiana, November 5, 1885, to select a site for the new quarters for the ordnance-sergeants at those posts. S. O. 230, Department of the East, October 28, 1885.

Captain G. H. Forney, Assistant-Surgeon.—Granted leave of absence for two months, to take effect after the return from leave of Surgeon J. C. Baily (major). S. O. 87, Division of the Atlantic, October 24, 1885.

Captain R. G. Ebert, Assistant-Surgeon.—Ordered from Camp Grant, Riverside Park, New York City, to Fort Hamilton, New York Harbor, for duty. S. O. 237, Department of the East, November 5, 1885.

First-Lieutenant G. E. Bushnell, Assistant-Surgeon.—Assigned to duty at Camp Grant, Riverside Park, New York City. S. O. 237, Department of the East, November 5, 1885.

First-Lieutenant C. C. Barrows, Assistant-Surgeon.—In addition to his other duties, to take temporary charge of office of the Medical Division, Department of Arizona. S. O. 102, Department of Arizona, October 17, 1885.

First-Lieutenant C. B. Ewing, Assistant-Surgeon (Fort Leavenworth, Kansas).—To accompany Congressional Committee, of which Hon. W. S. Holman is chairman, in its visit and inspection through Indian Territory. S. O. 160, Department of Missouri, October 23, 1885.

First-Lieutenant F. J. Ives, Assistant-Surgeon.—Relieved from temporary duty at Fort Laramie, Wyoming, and ordered to Fort D. A. Russell, Wyoming. S. O. 106, Department of the Platte, October 22, 1885.

First-Lieutenant E. R. Morris, Assistant-Surgeon (recently appointed).—Assigned to duty at Fort Bayard, New Mexico. He will continue on detached service under orders of District Commander. S. O. 160, Department of Missouri, October 23, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM OCTOBER 25, 1885, TO NOVEMBER 7, 1885.

Medical-Director David Kindleberger.—Granted leave of absence to June 30, 1886, with permission to leave the United States.

Assistant-Surgeon F. W. F. Wieber.—To remain on Receiving-Ship "Vermont" until May 15, 1886.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, NOVEMBER 28, 1885.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON ACUTE MANIA AND HYSTERICAL MANIA.

Delivered at the Philadelphia Hospital

BY CHARLES K. MILLS, M.D.,

Neurologist to the Philadelphia Hospital, and Consulting Physician to the Insane Department of the Hospital; Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic.

GENTLEMEN,—As soon as the doors of the hall were opened, we were greeted with noisy exclamations, alternating with singing and laughing, which, as you now observe, came from the patient before us.

The history of this patient, as furnished to me by Drs. Richardson and Avery, is as follows:

B. T., female, aged 25 years, single, German, her occupation that of a domestic, is a delicate, frail, and extremely emaciated girl, of medium height and slender build. She is of fair complexion, with blue eyes; the pupils are equally dilated. Her head is well formed and natural in size, with light flaxen hair. Her countenance is pale, and her expression peevish. She is of a nervous temperament.

Physical examination shows a dulness of percussion-note over the apex of right lung. There is also an exaggerated respiratory murmur, but otherwise the thoracic organs and the abdominal organs are apparently in a healthy condition. Her pulse is rapid and feeble; her skin rough and dry, with redness over the finger-joints and around the hip. The knee, elbow, and middle joints of her fingers are flexed and rigid. There are no bruises or other marks of injury about her person. Her tongue is slightly coated.

In June of the present year the patient began to neglect her work. She was listless, and seemed unable to fix her mind upon her occupation, but stood around without accomplishing anything. Shortly afterwards she took to her bed, where she has since remained. She was not thought to be insane by her friends until about four weeks ago, when she began to be irritable, capricious, irrational, and delusional. She gave her clothes away, claiming that she was rich, that she owned the whole world. She asserted that she was finely educated, that she was specially gifted. These and various other delusions of a pleasing nature presented themselves. Two weeks ago she became noisy at night-time, crying, singing, screaming, etc. She believes that the trouble with her joints came on as a punishment for attempting to commit suicide; thinks that she was bound hand and foot to prevent her from again undertaking such a sin.

On admission into the hospital, her delusions were numerous, but not unpleasant in character. She is now irritable and easily excited. Her mind is active, memory good. She has no history of epilepsy, and no symptoms of ordinary or general paralysis. Since her admission here she has been capricious and not easily pleased; she thinks that she owns the place, and that all the people in it are under her command. She orders barrels of California wine, bottles of champagne, beer, and various other things, saying that they have been sent her by her father. She accuses other people of the misdemeanors which she herself commits. She rolls out of bed and says that the doctor has thrown her out. She screams and cries nearly every half-hour, protesting that she is starving to death. When food is brought her she takes but a few spoonfuls, and immediately after being fed will declare that she has had no food for two or more days. Usually she is noisy and filthy at night, crying and talking in her sleep; although during Saturday and Sunday nights last past she was quiet and clean. Hydrobromate of hyoscine, in doses of one-sixty-fourth of a grain, has been given at bedtime. This induces sleep throughout most of the night; but the sleep is of a troubled character, and on awaking in the morning she maintains that her father has made her work hard all night.

The patient has been a temperate, hard-working girl, and the present symptoms of insanity are the first she has ever shown. Her insanity is said to have been caused by disappointment in love, which occurred a little more than a year ago. She attempted suicide in January, 1885. She has had amenorrhœa for about one year, and a hacking cough for at least six months. A sister died of consumption, and another was insane. Since last June she has lost flesh rapidly.

From this history it will be seen that the patient's sickness has come on gradually, that her condition has varied somewhat during the few months since she was first attacked, and that very recently she has developed marked mental excitement, which persists. Let us study the symptoms as they present themselves with the patient before us,—her present state, mental and physical.

In the first place, you notice that the patient is in a condition of *emotional* excitement: her emotional nature is exaggerated. This excitement or exaltation

exhibits itself in speech and movement. She is noisy; she is voluble; her speech is rapid; she shouts and declaims; she tells us that she will sing to us; without encouragement she attempts to sing. On the whole, her excitement is of a joyous or agreeable type; she is pleased with herself, and, as you see, is at the present moment in excellent spirits.

Secondly, she is *incoherent*. Incoherence, as some of you know, may be either of words and phrases or of ideas; that is, it may be verbal, or it may be logical or rational. In this patient's case the incoherence is evidently not verbal. She expresses herself volubly, but uses connected words and phrases: her incoherence is of ideas. While we have been here talking with her and about her, she has passed from one idea to another probably a dozen or more times; but the sentences are complete in themselves, and she even has several connected sentences relating to the same thought: this, however, appears to be as far as she is able to go.

Thirdly, she has *delusions*. They are of an expansive type. I ask her if she is married. "Oh, yes, I am married, and I had ten children in ten years." She is not married at all. The next moment she tells us she has been married twenty years. She says, also, that she has many fathers and mothers. Dr. R. is her father and Dr. A. her mother in this country, and she has another father and mother in Germany, and a father and mother in heaven. On remarking that she is thin, she replies, "Oh, no, I am not thin; I am six feet tall." Asking her about her means, she tells us, "I have a thousand dollars; my father gave me a million dollars. I own the whole world; the constitution is the world." She continues, "I will sing for you. I can sing for you 'My father and mother were Irish, and I am Irish too,'" etc. I ask her, if she is so wealthy, why does she stay here in a hospital? She answers, "I own this place; this is a great palace, which belongs to me, and if the doctors don't do as I say, I will get somebody else." [These remarks were made in a rapid, loud, declamatory manner, grimacing and gesticulating as much as the condition of her hands and arms would permit. She sang with a loud voice, interrupting frequently with sharp questions and funny or sarcastic remarks.]

This patient, then, has delusions, and also delusional states. These delusions vary somewhat in character, but within narrow limits. They seem to cluster around an exaggerated idea of her own wealth, importance, strength, and powers; she does not attempt to explain or justify anything that she says, but rapidly passes from one remark to another.

Sometimes the patient will have fits of crying and worrying, although these have not appeared to-day; but she has no persisting state of depression. The state at present is, on the whole, one of elevation, and undoubtedly more or less excitement is always present. Sometimes she is in a condition of true delirium, although this does not last long. When in this condition she has marked incoherence, excitement, more delusions, and a greater tendency to movement, with acceleration of pulse, but without, I believe, so far as has been noticed, any increase of temperature.

Let me next say a few words about her physical condition. As you have learned, she has a family history in which both phthisis and insanity have been present. Some physical evidences of phthisis are shown in this patient. She is emaciated and weak, although she claims that she is both fat and strong. Her pulse is frequent and feeble; her heart's action is somewhat rapid and tumultuous, but I cannot positively make out any murmur; she is pale and anæmic-looking.

Certain special physical symptoms are here present. In both the upper and lower extremities are marked contractures. All of her fingers are rigidly semi-flexed and cannot be straightened. Her forearms are only partly flexed upon the arm, and can be straightened, although she complains of pain when this is done. Her lower extremities show contractures at the knees and feet, the latter being in a partial equino-varus position, most marked in the right leg. She complains bitterly if any attempts are made at reducing these contractures. Inspection shows vivid redness of the small joints of the fingers, but not much swelling or heat. Everything goes to indicate that this affection is rheumatic or rheumatoid gouty in character. It is possible that either the phthisis or the rheumatism may have some etiological connection with the mania here present. Some authors describe both a *phthisical* and a *rheumatic* insanity, which

take various forms. We are not to-day, however, so much concerned with determining the character of the patient's disorder from an etiological as from a symptomatological point of view.

The patient eats at times somewhat ravenously. At present she sleeps fairly well, although she will awaken several times in the night, and when she does so usually asks for food or drink.

What are the nature and character of this case? That the patient is insane need not be said. As to the form of insanity, the excitement and incoherence, which are such prominent features, would decidedly incline us to the view of mania. Might it not, however, be some other form of mental disorder? Delusions of importance, of wealth, or of grandeur, and also incoherence, are present in several forms of insanity. It is often necessary to separate even melancholia from mania. At times cases of melancholia have periods of wild excitement, due to the depressing delusions of which they are the victims. They are fierce and agitated because of the horrors which surround them and the dangers which menace them or those that they love. This is *melancholia agitata*, a delirious melancholia, not mania in a true sense. This patient's excitement does not appear to be due to any cause of this kind: therefore we may exclude melancholia.

In paretic dementia, or general paralysis of the insane, as some of you well know, the so-called delusions of grandeur are among the most common and characteristic symptoms of many cases, although they are not always present. Paretic dements will often tell you, as this patient has told us to-day, that they are strong, that they are tall, that they are swift, that they are millionaires, that they have great power and authority, that they own a nation or the universe. Their delusions, like those of this woman, are not defended and are not systematized: they can be led, as this patient has been led, from one delusion to another. Symptoms such as these, however, will not enable us to make a diagnosis of paretic dementia. These expansive delusions may be present in mania of several forms. If this patient were a case of general paralysis of the insane, she would have certain physical symptoms which are here entirely wanting. The history of the onset and progress of her case would be different. Paretic dements usually have had attacks of paresis (fleeting, it may be), or of convulsions or convulsive seizures. They present certain oral symptoms, a peculiar staggering, hesitating speech, with tremor of the lips and tongue, and often a drooping of one side of the face. These phenomena are absent in this case.

In monomania the patients sometimes have episodes of excitement or delirium. In this patient, however, the elementary evidences of the existence of true monomania are absent. She has not now, and never has had, any delusions of an organized and systematized character, delusions around which she could weave a chain of more or less connected argument. Melancholia, paretic dementia, and monomania may then all be excluded. Epileptic mania may also be set aside. The history of epilepsy in any form is not here present.

I believe, therefore, that we must conclude that we have here to deal with a form of mania. The next question that confronts us is whether it is true mania or a form of the so-called *hysterical mania*. This is a diagnosis that it is well worth while to make; and, indeed, it may be highly important to determine. Some may tell you that it is impossible and of little moment to distinguish between common mania and mania of the hysterical variety; but with this view I do not agree.

The whole question of hysterical insanity is one that is wrapped in more or less difficulty and obscurity. The hysterical insanity of one authority may not be that of another. The older and some of the more recent writers on insanity do not recognize hysterical insanity as a distinct form of mental disease. Morel and Skae, in their etiological classification, and Hammond, Spitzka, Mann, and Clouston, in their recently-published works, give it a place. Krafft-Ebing not only recognizes hysterical insanity as a distinct form of mental disease, but, after the German fashion, subdivides it quite minutely. Spitzka speaks of chronic hysterical insanity as an "intensification of the hysterical character to which a silly mendacity is frequently added, and develops *pari passu* with advancing deterioration." Hammond, under hysterical mania, includes several different and somewhat distinct mental disorders.

The fact that hysteria may occur as a complication of various forms of insanity which very properly are not classed as hysterical insanities is often overlooked. Hysterical manifestations among patients suffering from some well-recognized, non-hysterical forms of insanity are of comparatively frequent occurrence. Paralysis, contracture, hysterical joints, hysterical neuralgias, convulsions, cataleptoid phenomena, and tremor are among the hysterical manifestations which have fallen under my personal observation among the insane of various classes.

A remarkable case of hysterical motor paralysis was observed by me at the State Hospital for the Insane at Norristown, and notes of the case have been furnished me by Dr. Alice Bennett, the Superintendent. This patient was an intelligent single woman, about 35 years of age, of good family, and well educated; she had been a teacher and a writer, and became insane through family and business troubles. When only eight years of age she was paralyzed for two and a half years, and had had at times during her life, before becoming insane, attacks of partial or complete unconsciousness. Prior to coming under observation she had been an inmate of an English private asylum. She was sick on shipboard coming to this country, and on her arrival was in a state of delirium and insomnia, with attacks of loss of sight. Four months later she developed mania with suicidal inclinations. Just before the development of this maniacal condition her lower limbs became comparatively helpless, and soon after she entirely lost their use. I found her in this condition. Examination showed no change in knee-jerk, electrical reactions, nutrition, or genito-urinary conditions, which led me to diagnosticate the absence of any organic spinal trouble. The case was pronounced one of hysterical paralysis, and it was prophesied that she would eventually completely recover, probably suddenly. For one year her paralysis remained, her mental condition varying greatly during this time: sometimes in a lethargic state; sometimes with variable delusions and delirium; occasionally violent and destructive, again peaceable and pleasant; sometimes requiring strong anodynes and hypnotics. Fourteen months after her paralysis began, she one day suddenly threw away her crutches and ran up and down the corridor of the hospital. From that time on she walked without difficulty, although her mental condition did not entirely clear up. I could give other detailed illustrations, but time will not permit me to do so. I simply wish to impress the fact that because you have hysterical manifestations in a case of insanity it should not necessarily be diagnosticated as one of hysterical insanity. Monomania, melancholia, mania, paretic dementia, epileptic insanity, and other forms of mental disorder may at times have a hysterical tinge or present hysterical episodes.

As I have already said, the whole question of hysterical insanity is one of great difficulty. The psychical element is probably at the root of all cases of hysteria; but this does not justify us in declaring that all cases of hysteria are insane. In practical professional life we must make practical distinctions. In the matter before us, distinctions are necessary to be made for legal as well as medical purposes. It might be right and proper to place a case of hysterical insanity in a hospital or asylum under restraint; but no one would dare to claim that every case of hysteria should be so treated.

Although my experience with all forms of hysteria has been large, I find myself hesitating as to the best manner of discussing and subdividing hysterical insanity. It is probably as good a method as any to divide it first into an *acute* and a *chronic* form, although in the chronic form we may have the acute variety as an episode or a link in a chain of events. In other words, an attack of acute hysterical mania may occur more or less frequently in the course of chronic hysterical insanity.

By acute hysterical insanity, or hysterical mania, I mean a disorder usually, in part at least, purposive, and characterized by great emotional excitement, which shows itself in violent speech and movement, and often also in deception, simulation, and dramatic behavior. The phenomena indicated by this definition may constitute the entire case, or, in addition, the patient may have, at intervals or in alternation, various other phases of grave hysteria, such as hystero-epileptic seizures, or attacks of catalepsy, trance, or ecstasy.

In chronic hysterical insanity we have a persisting abnormal mental condition, which may show itself in many ways, but

chiefly as follows: 1. A form in which occur frequent repetitions, over a series of years, of the phenomena of acute hysterical insanity, such as hysterical mania, hystero-epilepsy, catalepsy, etc. 2. A form in which sensational deceptions, sometimes undoubtedly self-deceptions, are practised. Under this head come the wonderful cases often recorded in newspapers, in which young women detail alleged assaults made upon them, make accusations of rape, or are the central figures in extraordinary occurrences, in which ghosts, acts of incendiarism, and the like are prominent.

In a case of chronic hysterical insanity you may have both of these forms commingling in varying degree. My time is too limited to allow me to go further into this interesting subject. I will now return to a discussion of acute hysterical mania, and, after showing you a case, will attempt to formulate the differential features which separate it from a case like the one that has just been studied.

This patient, G. ——, is a seamstress, 21 years of age. Although young in years, she is an old hospital rounder. She is now a patient in the Wards for Nervous Diseases of this hospital, which are not a part of the Insane Department. She has at various times been in almost all the hospitals of this city. At different times and in different institutions she has been treated for such alleged serious affections as fractured ribs, hemorrhages from the lungs, stomach, and vagina, gastric ulcer, epilepsy, apoplexy, paralysis, anæsthesia of various localities, amenorrhœa, dysmenorrhœa, and fever with marvellous variations of temperature. She has become the bane and terror of every one connected with her treatment and caretaking. She has developed violent attacks of mania, with contortions and convulsions on the streets and in churches. Considerable sums of money have been collected for her at times by those who have become interested in her as by-standers at the time of an attack or have heard of her case from others. She has made several pseudo-attempts at suicide. Recently an empty chloroform-liniment bottle tumbled from her bed at a propitious moment, she at the same time complaining of pain and symptoms of poisoning. She has refused to partake of food and has been discovered obtaining it surreptitiously. Her large and prolonged experience with doctors and hospitals has so posted her with reference to the symptomatology of certain nervous affections that she is able at will to get up a fair counterfeit of a large variety of grave nervous disorders.

She is now just passing through one of her attacks of hysterical mania, which was preceded by a series of hysterical phenomena, such as vomiting, hemorrhage, aphonia, ovarialgia, headache, and simulation of fever. She began by crying and moaning, which was kept up for many hours. She fell out of bed apparently insensible. Replaced in bed, she passed into a state closely simulating true acute maniacal delirium. She shrieked, cried, shouted, and moaned, threw her arms and legs about violently, and contorted her entire body, snapping and striking at the nurses and physicians in attendance. At times she would call those about her by strange names, as if unconscious of the true nature of her surroundings. Attacks of this kind were kept up for a considerable period, and after an interval of rest were repeated again and again.

This is simply a sketchy outline of the case. In private practice I now have under my care two somewhat similar cases, in one of which the maniacal or pseudo-maniacal excitement is the only prominent feature; in the other, these attacks are accompanied by or alternate with states of trance, ecstasy, pseudo-somnambulism, and catalepsy.

In what do these cases differ from the case of true acute mania the examination and discussion of which have occupied the first half of our hour to-day?

In both cases we have great excitement, shown in speech and movement.

In hysterical mania the outbreak of excitement is generally sudden, although prodromic manifestations are sometimes present, and this point of difference is not one to be absolutely depended upon. In acute mania incoherence and delusions or delusional states are evidently more genuine phenomena than in hysterical mania. In hysterical mania hallucinations or delusional conditions may be present, but they differ from those of acute mania. The hallucinations of hysterical cases are apt to be of a peculiar character. Frequently such patients see or say that they see animals,—rats, toads, spiders, and strange beasts. Their delusions have the appearance of being affected in many cases; very often they are fantastical; and sometimes, at least, they are spurious or simulated. In these cases special grave, isolated hysterical symptoms often occur during the progress of the attack,—such phenomena, for instance, as obstinate mutism, aphonia, pseudo-coma, and trance. These are usually wanting in acute mania. Cases of hysterical mania will threaten, or apparently attempt, suicide, but their attempts

are not genuine,—they are rather acts of deception. In acute mania, under the influence of excitement or of certain delusions, the patients, if not carefully watched, may take their lives. Cases of acute mania will sometimes starve themselves, or become very much reduced and emaciated from a refusal to take food; sometimes, on the other hand, they eat voraciously. The hysterically insane will threaten to starve themselves, but only in extremely rare cases will they really do so. As a rule, considering the amount of mental and motor excitement through which they pass, their nutrition remains good. Acute mania and hysterical mania terminate differently. The former, under judicious treatment and management, may gradually recover; sometimes, however, it ends fatally. This is specially likely to occur if the physician supposes the case to be simply hysterical and the administration of nourishment is neglected in the early history of the case. Hysterical mania very seldom has a serious termination unless through accident or complication. In acute mania sleeplessness is commonly a prominent and distressing symptom, and often persists day and night. In hysterical mania the patients, as a rule, will get a fair amount of sleep some time in the twenty-four hours. I have noticed the peculiarity that in some cases of hysterical mania occurring in private practice the patients have had their worst attacks early in the morning, after a good night's rest.

In the treatment of acute mania the chief indications are to produce sleep, control excessive excitement, and thoroughly nourish the patient. Hydrobromate of hyoscine in doses of $\frac{1}{80}$ to $\frac{1}{100}$ of a grain, fluid extract of conium in doses of from five to twenty minims, and a combination of the bromides with chloral, are the most useful medicinal remedies. Tepid baths are also useful. The patient should be fed systematically, and an amount of nourishment even in excess of that which would be taken in health administered. In hysterical mania the treatment resolves itself largely into moral measures and the management of particular symptoms.

A New Light.—The Ideal Electric Lamp, with its circular hollow flame, is said to give a light of fifty-candle power. It is ornamental as well as useful.

ORIGINAL COMMUNICATIONS.

MEDICAL SUPERVISION IN STUDENT LIFE.

BY CHARLES McINTIRE, Jr., A.M., M.D.,

Lecturer on Hygiene, Lafayette College.

Read before the American Academy of Medicine, October 28, 1885.

IT does not require a very profound study of history to discover that the manifestations of the habits of man and of his modes of living have changed with the advance of years and the march of civilization. Whether or not the motives underlying and impelling these manifestations have undergone any change, or whether it is simply a regrouping of the old factors, is a question that would require a deeper search and would lead us in a different path than is contemplated.

Let us be content to accept the conditions without any regard to questions of cause and effect. It is evident that the occurrences of the life of an average person in this the last quarter of the nineteenth century are different in many ways from the happenings of a corresponding person at the opening of the century. The opening up of the various fields of knowledge has so broadened the world; the improvements in modes of locomotion and correspondence have so narrowed it; the advances in printing processes, in domestic architecture, and the "modern improvements;" the ease for acquiring the rudiments of knowledge, and other factors equally patent and potent, have made the whole land the metropolis. *Urban* and *rustic* have largely lost their significance. With these conditions the question suggests itself, whether this change of environment has caused any change in the man which would require new observation and additional care by the physician. I desire to discuss this question with as little theory as possible, and will consequently exclude the hypothesis that if the fathers possessed the same means for investigation, or had had their attention called to the conditions, they would have found and described what is now called new: indeed, "a right and charitable frame of spirit" towards the elders would exclude its entertainment.

Have we any testimony regarding the change of man physically? I need but remind you of the writings of our late and

lamented fellow, Dr. Beard, upon neurasthenia; of the many series of investigations upon the eyes of the people, especially of those in schools and colleges; of a similar investigation by Dr. Sexton on defective hearing; of the valuable observations of Dr. L. B. Tuckerman in the public schools of Cleveland. To these one may add a mere mention of the increase of suicides, of a greater number of hospitals for the insane, and of patients inhabiting them, to show that there is, apparently at least, a change in the condition of man, a deterioration from the health normal. And if this change tends to neurasthenia, to the development of defective eyesight or audition, to an inability to continue on in school life,—if it enters in the slightest degree as an etiological factor in the increase of self-murder, or of increasing the practice of alienists,—it is not a change to be admired or desired.

There follows a duty for those of us who are placed on the watch-towers. We must either sound the alarm of the enemy's approach, or prove conclusively that the conditions alluded to are but a mere mirage and the enemy a phantasm.

Assuming for the present purpose the accuracy of the conclusions of so many and able observers, can we, in the first place, discover aught that might be taken as causative, and, in the second, suggest anything looking towards a remedy? While indeed "tempora mutantur," except to the astronomer, the days of man remain unchanged, containing precisely eighty-six thousand four hundred seconds, and the body of man, as of yore, demands rest and exercise. There is a wear and a tear, which of necessity takes place in almost a mathematical ratio directly to the work and the worry, and there must be a repose and a repair, or somewhere the machinery will give way. It is quite generally asserted that there are greater demands upon one's time in the nowadays than of yore. The school-boy, *e.g.*, has the number of his studies multiplied and the length of his tasks added to, and, as a consequence, rest and recreation hours are apt to be intrenched upon. And instead of keeping up or increasing one's strength, the capital stock is drawn upon, often greatly affecting the solvency of the individual. Under the former *régime* rest and recreation brought recuperation and development. The body grew healthfully and symmetrically, because it had opportunity so to do. At the present the body-powers are frequently taxed simply to exist and to resist the excessive drain upon them. If these statements express the facts in the case, a clue is furnished us for the cause: then, what shall be done? Go back to the older and physically less exhausting plan? To attempt this would, I fear, be but to copy Mrs. Partington mopping the ocean. What remains, then? The application of the principles that have marked the advance of civilization in other matters, to the care of the body. While man has been adding improvements and conveniences to that which surrounds him and to himself mentally, æsthetically, yes, even gastronomically, the maintenance of a sound body has been for the most part left to the methods of the former generations. Crab-like, he has outgrown his shell, and it is high time he searched for another.

Scientific progress has not as yet shown any way by which a man can diminish the proper amount of rest and thrive. Our attention, therefore, must wholly be devoted to the recreative. Can it be so arranged that the body may have such attention paid to it that there may be proper development in the diminished time that can be given to it?

Beginnings have been made looking to this end, starting possibly with the revival of the gymnasium in Germany and the development of Turn-Vereins, and the expansion of movements in Sweden, together fusing into lighter gymnastics. Amherst College some twenty-five years ago introduced a regular compulsory exercise, after measurements of the body more or less complete, and they have been adding to the care of the physical examination and more carefully directing the exercise to strengthen the weaker parts in the years that have followed. Dr. Sargent, of the Hemenway Gymnasium of Harvard University, is known as the author of a system of regulated exercise looking to this same end; and there have been other workers in the same field. In 1874 the public schools of Brussels were placed under direct medical inspection, five physicians devoting their entire time to the inspection of buildings and pupils, keeping accurate anthropometric records, to instruction on the care of the body, including gymnastics, and to the prevention of the spread of disease; and the results ob-

tained were in every way satisfactory. There have been other attempts at medical supervision, more or less complete, but the result of their labors is not at hand.

The necessity of an early examination of the eyes and ears of children, in order to take the proper care of them in school life, has been urged for some time by physicians interested in these subjects.

It seems, then, that the best way to fight the fire is with fire. Science, in its progress, makes a greater demand upon the body. Let us bring the results of this scientific progress to our aid in the maintenance of health and for the development of sturdy, healthy bodies. At the beginning of the school age, if not before, the child should have a thorough physical examination, and the weak points made known. Then, as a part of the school course, let systematic graded exercise be given, dividing the scholars in classes according to the physical condition of the child, after the same manner that they are divided in classes for mental improvement. And from the first the child should be kept under trained supervision guiding and directing its growth. Of course such a scheme as this would involve an outlay of money by no means inconsiderable; for it is to be hoped that the already too generous physician would not make an additional contribution from his capital to the many he is already making, far in excess of the gifts to public good of any other calling. But the necessity of State Boards of Health is everywhere recognized. Even in Pennsylvania our stolid Keystone legislature has at last given way. And certainly the need to develop healthy men is no less a state duty than to prevent disease or to perform any other function given to health boards. Of course it would be of equal advantage to the young people in business as for those of the same age in the higher institutions of learning. But our government could not probably be made sufficiently parental, nor is it desirable that it should be. If the proper bend is given to the twig in school before entering upon the more active pursuits of life, possibly the tree will keep inclined in the right direction, and the early habits lead to a correct estimate of the worth of a strong body and the adaptation of proper means to keep it so.

An after-thought, hardly of the nature of a corollary, but rather a scholium. There is a general, although excusable, ignorance of the object to be attained, and the means to accomplish this desired end in a present-day gymnasium. I quote from memory an interview, reported in a newspaper, with Dr. White, director of the gymnasium of the University of Pennsylvania, to show the object: "In ordinary training the desire is to bring into prominence the best parts of a man. The man with strong loins and back is put on the crew, and the quick runner will be entered for the foot-race. In the new [University of Pennsylvania] gymnasium training the weak parts are sought out, and the weak-backed would be put to the oar [not for a race], and the spindle-shanked to the running-track."

The system of gymnastics to bring this about involves the use of very light exercise, for the most part the use of variations of a pulley and weight, by which almost any set of muscles can be brought into use at will. By the proper adjustment of the weight an accurately graduated series can be arranged adapted to all degrees of strength or of weakness. The various paraphernalia usually associated in the mind of *οἱ πολλοι* with a gymnasium are used voluntarily, and even then under direction. Experience shows that there is a fear upon the part of the parents of weak young men lest the gymnasium course should prove injurious; yet these are the ones most requiring it, they are the most carefully directed, and are under the closest supervision.

The strong and active will, under the enthusiasm of a good instructor, almost take care of themselves. The healthy and lazy assist in the moral as well as physical development of the director, while the weakling in any way is a subject of his especial care, and every increase in health-power or strength becomes a subject for special jubilation.

Now, if there is not a serious flaw in the facts mentioned or in the conclusions arrived at, there remains a duty for us. We should in every way possible so enlighten the unprofessional mind that the value of bodily care in school life may be seen by all, and that which at the present seems hardly more than a dream shall become a fixed fact.

A CASE of Cæsarean section after the death of the mother, the child surviving, is reported by Dr. J. Mack Hays in the *Medical Record*, p. 563.

A CASE OF SCIRRHUS OF THE COLON—LAPAROTOMY.*

BY FERDINAND H. GROSS, M.D.

THE specimen of intestinal tumor which I have to exhibit was removed from the body of a man whom I saw a number of times during his last illness, in consultation with Dr. C. H. Gardner, the attending physician, and Dr. J. M. Da Costa. The following is prepared from the notes of the case furnished me by the former.

Mr. C. T. S., aged 38, a native of Philadelphia, of healthy parentage, fine physical development (height five feet seven inches, normal weight one hundred and seventy pounds), of strictly temperate habits, and by occupation a stove-pattern manufacturer. He had always led an active life, and occasionally took part in athletic games. In his family record there appeared to be no points of pathological interest, except that an aunt died of cancer of the face.

Fifteen years ago he had an attack of jaundice, with severe headache. The liver was perhaps slightly enlarged, and the bowels were constipated. After a course of medication lasting from three to four weeks, he recovered.

It was his habit to indulge in yachting on the Delaware River, and four years ago he extended this sport late into the autumn and contracted malarial fever. Under Dr. Gardner's treatment he again recovered, after an illness of two weeks' duration.

The patient's last sickness dates from the 1st of June, 1885, nearly five months prior to his death. He had been engaged all day in a yachting-contest, and returned home very much exhausted. From this time he continued to complain, and soon began to lose flesh. With a view of regaining his health, he made several visits during the summer to Cape May and Atlantic City; but no improvement resulted from these periods of rest and sojourn at the sea-shore. Dr. Gardner states that his symptoms were rather vague. He complained mostly of an uncomfortable feeling in the region of the stomach and liver, and this occasionally amounted to a dull pain, but it was not of a darting or shooting character. He would frequently say, "There is something wrong with my belly." As the case progressed, the patient would locate the pain more in the epigastric and umbilical regions, and occasionally in the left side, rather than in the region of the liver.

About the 1st of August the symptoms were regarded as being of a dyspeptic character, and were partially relieved by the use of pepsine and subnitrate of bismuth. Whilst he obtained no complete relief, he was not incapacitated from attending to his usual business. In the latter half of September he complained for the first time of severe cutting pains in the left hypochondriac and lumbar regions. The nature of these pains was so different from the patient's previous sensations that he described them as "a new departure." On the 24th of September, Dr. Gardner discovered an area of abnormal dulness extending over and beyond the region of the spleen. By the administration at this time of mild cathartics and quinine, and by the application of external irritants, the pain was considerably relieved and the area of dulness diminished. He continued to go to his place of business, but by the 1st of October he had lost thirty pounds in weight.

On that day Dr. Gardner brought him to my office for consultation. The history of the case as then obtained was in the main as has just been given. A physical exploration evinced nothing abnormal about the thoracic organs. The abdomen was somewhat distended. In the left hypochondriac region there was abnormal dulness on percussion, and something like a hardened mass could be indistinctly felt. Pressure upon this point caused some discomfort, but no acute pain. Whether these abnormal signs were due to a morbid growth, to accumulation of fæces, or possibly to an enlarged spleen, I was not able to determine definitely. The history of the case, and especially the marked loss of flesh, pointed rather to the existence of organic and possibly malignant disease. Pressing manipulation over the liver was readily tolerated by the patient, and that organ showed no well-marked change in size. His complexion was sallow, but the conjunctiva was not tinged. A subsequent examination of the urine showed it to be non-albuminous. A mild purgative was ordered, and, as malarial infection was suspected, ten grains of quinine were directed to be taken every other day.

I heard nothing further of the patient until I was requested to meet Dr. Gardner at the bedside, nine days later. I learned then that the laxative medicine ordered at the time referred to had produced two free alvine evacuations and afforded considerable relief; but after that the bowels again became bound up and the same dull aching pain continued. For five days all efforts to open the bowels had failed. The patient continued to go about, and on the 7th of October called at Dr. Gardner's office. He complained now of a bearing-down sensation, with a frequent desire to go to stool, but without obtaining any relief. On that night a large enema of soapy water, with castor oil, turpentine, and olive oil, in all about a quart, was injected. This produced one free evacuation, but the character of the dejection was not ascertained. Feeling somewhat relieved, he returned to his business the next day. During

* Read before the Philadelphia Academy of Surgery, November 2, 1885.

the same evening, however, he began to vomit, and at 10 P.M. sent for his physician, who found him vomiting and retching violently and in great pain. The stomach would not retain anything. The drinking of warm water relieved the distress somewhat. An enema was again used, which soon came away, bringing with it only one small lump of fæcal matter. A large flexible male catheter was next introduced and passed beyond the sigmoid flexure, and by this means a quart or more of fluid was injected into the bowel, but with no better result than before. The abdomen was now directed to be freely rubbed with warm castor oil, and to be covered with flannels dipped in hot water. After this the patient rested comfortably for the rest of the night; pulse 82, temperature normal.

On the next day, the 9th of October, as already stated, I was requested by Dr. Gardner to see the patient. We found him resting comparatively easy; the bowels had not been moved. The abdomen was somewhat swollen, and, although considerable pressure with the hand was easily borne, the hardened mass which I had discovered at my first examination, nine days prior to this, could not now be felt as before, and seemed to have disappeared. Abnormal dulness, however, over the region of the spleen still existed.

It was thought that the change in the physical signs might be accounted for by the fact that the patient had had several alvine evacuations since my previous examination, and that there might have been an impaction of fæces in the colon. As there was no fever, the pulse only 82, no great tenderness of the abdomen, and as enemata had latterly failed to produce an evacuation, it was agreed to try another mild cathartic by the mouth. A mixture was ordered containing sulphate of magnesia, aromatic syrup of rhubarb, and tincture of hyoscyamus and belladonna. A dose was given every hour. Towards evening it was found that he could not retain the medicine, and was again vomiting frequently. Hot applications were again made to the abdomen, and a little beef-tea and milk with lime-water were occasionally given. Later on a Dover's powder was administered, and he again passed a quiet night. On the 10th, one-fourth grain of calomel was given every two hours until two grains were given. There was frequent desire to go to stool, accompanied with tenesmus, but no evacuation followed. In the night one grain of opium in the form of a rectal suppository procured good rest. On the 11th he was again restless and occasionally vomiting. The opium suppository was repeated with good effect. The real cause and nature of the intestinal obstruction remained obscure. There never had been singultus or any vomiting of fæcal matter. Tenderness of the abdomen had not yet very markedly increased. He was next given one-third grain of aloin every two hours until he had taken four or five doses, but there was no effect upon the bowels.

On the 13th Dr. Da Costa joined us in consultation. Various causes of intestinal obstruction were considered, such as intussusception, volvulus, fæcal accumulation, enteroliths, gall-stones, stricture, tumors, chronic lead-poisoning, etc. The early belief of the attending physician, that the trouble was due to a slowly-forming stricture or to some obscure morbid growth, seemed to be the most tenable position, but was not made out with entire clearness. The early history of the case and the steady loss of flesh pointed strongly in that direction. Our next step in the treatment was the injection of a pint of warm olive oil, the nates to be kept elevated and the shoulders depressed. The oil was retained one hour, when it came away with some gas but no fæcal matter. Vomiting (which was never of a fæcal character) returned, and there was increase of pain. The suppository of opium never failed to give relief from the latter. On the 14th there was no improvement. Dr. Da Costa met us again on the 15th and 16th, but all our efforts to overcome the trouble were futile. At one time about two quarts of fluid were injected by means of the long tube, demonstrating that the obstruction was not in the rectum, sigmoid flexure, or lower portion of the colon.

At our final consultation with Dr. Da Costa, on the 19th, the question of laparotomy was considered. It was clear to all that the patient could not survive much longer under the existing conditions. Death seemed absolutely certain, and the operation, although a desperate step, might, in view of the unascertained nature of the obstruction, afford a slight chance for life. This view was clearly stated to the patient and his family. Their consent having been obtained, I at once undertook the operation, Drs. Gardner and J. M. Barton assisting. The patient was etherized at 1.15 P.M., and the abdominal cavity opened by an incision in the linea alba extending from a point two inches and a half above the umbilicus, around the left of that point, and two inches below it. A large portion of the small intestine, greatly distended and showing marks of inflammation, protruded from the wound. The operation was performed under antiseptic precautions; the spray, however, was not used. The hand was inserted into the abdominal cavity in search of the obstructed point. Deep in the left hypochondriac region, tightly bound down posteriorly, a hard nodular tumor was felt. It was clear that it involved and occluded the adjoining portions of the transverse and descending colon. It was held to be some form of cancer, and, as nothing could be done with it, we decided to puncture the protruding small intestine at a low point, allow it to empty itself, and afterwards stitch it to the lower end of the abdominal wound, establishing a fæcal fistula.

From the opening made in the gut, gas of an exceedingly offensive character and fully two quarts of thin, dark fæcal matter escaped. It required great care to prevent the abdominal cavity from becoming polluted. The protruding intestine was carefully washed with an antiseptic solution of bichloride of mercury, returned within the abdomen, and the wound closed down to the point of the fæcal fistula. The patient recovered nicely from the effects of the ether; about 3 P.M. was given morphia hypodermically. At seven he appeared bright, quite talkative, and took some beef-extract with a relish. Morning temperature 100°, pulse 120; evening temperature 103.4°, pulse 130. Urine drawn off with the catheter.

20th.—From 2 to 3 A.M. he was in great pain and was vomiting. An opium suppository gave decided relief, and he retained some beef-tea and a little brandy. Temperature 102.4°, pulse 140. Some fæcal matter oozed from the fistula, and the urine was again drawn off. During the afternoon the pulse began to fail, and the extremities became cold. He remained conscious until 8 P.M., and died shortly before midnight.

By an examination of the specimen on the table, it will be found that the diseased mass involves and completely encircles the adjoining portions of the transverse and descending colon. The occlusion of the gut is not absolute, as a finger can still be passed through it. On laying the mass open, it is found that a thick, somewhat flattened portion of the new growth projects into the lumen of the canal, and valve-like closes from above the contracted passage still remaining. The stomach, in the course of its greater curvature, is adherent to the diseased mass of the colon. The spleen (not enlarged) is also adherent. The other abdominal organs showed no marks of disease.

Dr. J. M. Barton exhibited a section under the microscope, which showed the neoplasm to be scirrhus.

REVIEW OF MEDICAL CHEMISTRY.

BY WM. H. GREENE, M.D.

EXAMINATION OF URINE.

MAX RÜBNER employs the following method for the detection of glucose: From ten to twenty cubic centimetres of the suspected fluid are treated with one and a half cubic centimetres of a strong solution of neutral lead acetate, and ammonia is added in sufficient quantity to form a permanent precipitate; the mixture is then warmed or allowed to stand for a time at the ordinary temperature. A rose or flesh coloration of the precipitate indicates the presence of glucose, although the latter may constitute as small a quantity as .02 per cent. of the solution. Lactose produces a similar result after long boiling. If ten cubic centimetres of a solution containing about .01 per cent. of glucose be boiled with the required quantity (one gramme) of pulverized lead acetate, and ammonia be added to the boiling liquid until a permanent precipitate is formed, the solution becomes yellowish or reddish, and a yellow precipitate separates. These reactions are said to be characteristic of glucose. When a solution containing at least .02 per cent. of lactose is treated as last described, a yellowish color appears and changes to brick-red; at the same time a partially crystalline cherry-red or copper-colored precipitate is formed. If an insufficient quantity of lead acetate be employed, the precipitate will be of a dirty-brown color.

In the application of the method to urine, the author recommends that the liquid be filtered from the precipitate first formed, and states that 0.1 per cent. of glucose, or 0.05 per cent. of lactose, can then be detected.

J. Seegen has reported a case of diabetes in which the urine contained levulose, the results of volumetric analysis, of fermentation, and of polarimetric examination corresponding so closely as to preclude the possibility of error.

Rautenberg has proposed that in the application of Liebig's volumetric method for the estimation of urea, the fifteen cubic centimetres of baryta mixture and urine (corresponding to ten cubic centimetres of urine) should be treated with an excess of pure calcium carbonate before titrating with the mercuric nitrate solution; sodium acid carbonate must then be substituted for sodium carbonate in determining the end of the reaction. Th. Pfeiffer has studied this process, and finds that it gives exact results, but that less mercuric nitrate is required than in Liebig's original method. A mercury solution of which each cubic centimetre corresponds to ten milligrammes of urea should contain only 60.186 grammes of the metal in a litre, and the degree of acidity of the liquid is not a matter of importance. According to Liebig, the too high results obtained in the analysis of solutions containing less than two per cent. of urea must be corrected by deduct-

ing from the number of cubic centimetres of mercuric nitrate used the product of the difference between this number and double the volume of the urea solution by .02. This coefficient is not, however, constant, and must be determined separately for every mercuric solution. For one of his solutions Th. Pfeiffer found that the dilution coefficient was .03. In the application of the method to human urine he recommends that the sodium chloride be previously precipitated by the addition of silver nitrate, a slight excess of which does not impair the accuracy of the results.

A. Villiers has made some experiments to determine the accuracy of the assertions of Bouchard and Pouchet that normal urine contains alkaloids. The results of the examination of his own urine and that of nine other persons lead to the conclusion that normal urine, voided during a condition of good health, does not contain alkaloids, but that the latter may appear during very slight indispositions, such as a light bronchitis or a feverish condition of the system. The same effects may be due to old lesions which are unnoticed and even forgotten by long habit; and Villiers suggests that the presence of alkaloids in the urine may at some time prove serviceable as a means of diagnosis in such cases. Alkaloids were found in the urine of patients suffering from measles, diphtheria, pneumonia, and phthisis, when no medicaments containing alkaloids had been administered.

For exact estimations of the total nitrogen in urine, E. Pflüger and K. Bohland recommend that five cubic centimetres of the urine be boiled with ten cubic centimetres of ordinary and ten of fuming sulphuric acid until the fluid is pale yellow in color. It is then diluted with water and distilled with eighty cubic centimetres of sodium hydrate solution of 1.3 specific gravity. The distillate is condensed in normal sulphuric acid, whose subsequent titration indicates the quantity of ammonia formed.

PTOMAINES IN PULMONARY DISEASES.

Villiers has extracted from the organs of two children who succumbed to bronchopneumonia after measles, a volatile fluid alkaloid. The organs were treated according to Stas's method, and the alkaloid was found in the lungs, the liver, and the kidneys. He suggests that the lesions discovered in these organs after pneumonia may be due to the presence of the alkaloid which he considers identical with that which he had previously obtained from the cadaver of a diphtheritic patient. It differed from the alkaloid found after death by cholera in its behavior towards reagents, in its feeble basic properties, and in its physiological action.

DETECTION OF ALKALOIDS IN ORGANIC SUBSTANCES.

Th. Chandler has published (*Zeitschrift für Physiolog. Chemie*, ix. 40) a new process for the detection of strychnine and other alkaloids in the tissues. The organs are finely chopped and mixed in a mortar with an equal weight of gypsum which has been previously dried at a temperature of 130° C. The mixture is dried on a water-bath at about 70° C., and then boiled with a solution of tartaric acid in ninety per cent. alcohol, the quantity of acid employed being equal to about one-hundredth the weight of the dry mixture. The residue left after the evaporation of the alcoholic extract is exhausted with boiling water; the filtered aqueous extract is evaporated to twenty or twenty-five cubic centimetres, rendered slightly alkaline with sodium hydrate, mixed with gypsum, dried in a desiccator, and the residue exhausted with chloroform. The chloroformic extract is evaporated to ten or fifteen cubic centimetres, and then mixed with an equal volume of a saturated ethereal solution of oxalic acid. In the course of twenty-four hours oxalates of the following alkaloids would separate from the liquid: strychnine, brucine, narceine, codeine, nicotine, conine, aconitine, hyoscyamine, veratrine, papaverine, thebaine. With the exception of the last two, of which traces remain in the solution, these oxalates are totally deposited. If the alkaloid be strychnine, the oxalate is collected on a filter, washed with a mixture of equal parts of chloroform and ether, dissolved in a little water, and decomposed with ammonia. If a quantitative estimation is desired, the weight of the dry strychnine must be increased by that which would remain in the aqueous solution which retains $\frac{1}{6667}$ of its weight. If the alkaloid be other than strychnine, it may be obtained pure by dissolving the oxalate in alcohol, precipitating the oxalic acid by the cautious addition of potassium hydrate and the excess of the latter by a

current of carbonic acid gas. The pure alkaloid then remains in alcoholic solution.

Pouchet has found that a pure culture-liquid of Koch's cholera microbe contains small quantities of a liquid alkaloid whose odor and poisonous effects appeared to be identical with those of the alkaloid he had previously isolated from the dejections of cholera patients. The confirmation of these results by those of experiments undertaken on a larger scale would be an indirect proof that Koch's bacillus is the veritable pathogenic factor of cholera.

E. Serrant advocates the use of orthoxyphenylsulphurous acid as an antiseptic, and proposes for it the name "aseptol." It is formed by the action of sulphuric acid on phenol, and is at ordinary temperatures a syrupy liquid, usually having a red color, soluble in all proportions of water. It solidifies at 8° C., and boils at 130°. Its antiseptic properties are claimed to be more active than those of phenol, and it is not very poisonous, so that it may be administered internally in tolerably large doses.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF THOMAS G. MORTON, M.D.,

One of the attending Surgeons to the Hospital.

NEW METHOD OF TREATING FRACTURE OF THE PATELLA.

A MAN about 50 years of age was brought before the class October 17, who twenty-four days previously had been admitted suffering with severe contusion of the right knee, and a transverse fracture of the patella just below the middle. The injury was caused by a fall while getting off from a street-car: the car being still moving, the patient stumbled, but retained his hold upon the car, which caused him to fall, and he was dragged a short distance upon his knees.

When he was admitted into the hospital on the 23d of September, he was confined in bed with a straight posterior splint under the knee-joint, and lead-water dressings were applied to check the effusion and cause its absorption. On the fifteenth day after his admission, all signs of inflammation having disappeared, the new apparatus was applied, which will be explained later. He has now had the instrument in place for nine days: it has accomplished its function of holding the fragments of bone in exact apposition during that time, as it does at present, and it has not excited any inflammation or signs of irritation.

The object sought to be attained in the treatment of fracture of the patella is to bring the fragments together as soon after the accident as possible, and retain them in that position until union takes place: if this is successfully accomplished, bony union may be confidently expected. In this case there was so much effusion that I even thought of resorting to aspiration of the joint; but finally the inflammation was controlled by evaporating lotions, compression, and rest. Two weeks passed before the apparatus was put on. I would prefer to apply it, as a rule, within a few days after the fracture, because the exudation which is thrown out between the fragments may prevent perfect apposition and thus hinder union. In order to get firm osseous union the bone must be adjusted as accurately and as early as possible.

Different expedients have been devised in treating fracture of the patella, all endeavoring to attain the desired end. One method in common use is a hinged posterior splint for the knee to rest upon, extending three-fourths up the thigh and about four-fifths down the leg. It has a screw by which the angle of the knee can be changed at pleasure; besides this it has on each side of the joint a screw-pin fastening both in the upper and lower segment. The bandage is to be fastened to these pins and passed above and below the patella, so as to draw the fragments close together and enclose the joint.

The effects of this pressure should not be ignored. The fragments are not very freely supplied with blood, and this pressure must interfere decidedly with the feeble circulation, and may cut it off entirely, but the bone requires a good circulation in order to get union. The major proportion of the forms of apparatus used in the treatment of fractured patella are open to this objection. This is the reason, in my opinion, why we have so many cases of fibrous union and so few of bony union. The disadvantage of fibrous union is that the gait is usually interfered with: lameness is the rule, its absence is exceptional. Sometimes the bandage is applied too tightly, and I have known it (though

not in my own practice) to cut down to and expose the tendon of the quadratus extensor muscle.

Here are Malgaigne's hooks, which Agnew's "Surgery" declares to be "infernal machines," though the author, I believe, states that he has never used them. I have applied them to proper cases for the last twelve years, and have never seen any bad results from their use. In one case, however, I can recall the fact that I had to take them off on account of continued effusion in the joint, which I had previously aspirated on several occasions; but this was not caused by the hooks, but due to the previous effusion and irritation resulting from the injury. Dr. Levis has separated the hooks into two lateral halves, with a view of obtaining more perfect apposition. I still use the original form, but for very fat persons I have had a pair made with the hooks extra long, in order to reach down to the patella when it is buried in fat.

In applying the hooks, they should be adjusted so as to bring the surfaces together, bone to bone. Then elevate the leg upon a splint, and envelop the joint in lead-water and laudanum. I have succeeded in getting bony union by this means in a number of cases of fracture of the patella, but I was still not quite satisfied, and so I devised this instrument. It is a slender drill in a movable handle (in fact, very much like Brainerd's drill). With this the fragments, after being placed in position, are transfixed from below upward, parallel with the axis of the limb, until the extremity emerges from the skin above the joint. The steel cap is then slipped on the end and fastened with a screw, so as to prevent the bones from becoming separated. The joint is then enveloped in an anodyne lotion, and elevated as before. The results have been excellent. There is no inflammatory reaction, there is not even redness, and not a drop of pus; the fragments are in perfect apposition, so that one can to-day scarcely, after careful examination, tell where the line of fracture was. The idea is that the increased supply of blood attracted towards the part by the irritation of the screw is of advantage in bringing about union. No bandages are required. His temperature has not been above normal. In order to insert this drill no anæsthetic was needed, as it gave very little pain. Of course the joint must be kept quiet and extended on a splint. There appears really to be no more risk with this instrument than with Malgaigne's hooks, and thus far I have been better pleased with it than with the hooks. It is a very much easier instrument to apply than any other form of apparatus.

COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE.

SERVICE OF OSCAR J. COSKERY, M.D.,

Professor of Surgery in the College of Physicians and Surgeons.

CASE OF HODGKIN'S DISEASE.

GENTLEMEN,—The patient before us comes from Pennsylvania with the following history. Aged 48, a mechanic, married, and with a good family history. Three ago, a lump made its appearance below each ear; soon afterwards a swelling came in each groin; a few months later, in the axilla; and, still later, below the first, in the neck. The patient only feels pain in any of the swellings when he exerts himself or indulges in stimulants. At times the growths are very much harder to the feel than they are at others. The physician in whose charge the patient has lately been, and who brings him to us, has used locally warmth and moisture, and internally the iodide of potassium and arsenic. Under this treatment the patient says that he has very much improved, and that the tumors have decreased in size. He does not say that he has "picked up flesh," or can do his work any better than he could a year ago, but that he feels generally better.

On examination, we find both sides of the neck swollen out by growths that can easily be grasped by the hand, are superficial, and are plainly enlarged glands. On each side the mass is as large as a turkey-egg. In each axilla is a mass of glands the size of a base-ball, freely movable, and pushing forward the pectoralis major muscle. In each inguinal region is a tumor formed of the upper range of lymphatic glands, irregularly knobbed, and measuring about two and one-half inches in every diameter. The enlargement on either side cannot positively be followed into the abdomen, on account of the size of this cavity; but, upon percussion, the splenic dulness is found to extend for five inches in the axillary line, and the liver-dulness to

below the costal border. While the patient is in seemingly good general health, it will be noticed that he is decidedly anæmic.

There can be very little doubt, from the history, the characteristics of the growths, their positions, and the age of the patient, that we have before us a case of what is now known as lymphosarcoma, lymphadenoma, or more familiarly as Hodgkin's disease,—for, although observed before his time, it was not until 1832 that attention was called to it as a special disease by Dr. Hodgkin. In this disease we find an increase in the general structure of the gland and a special deposit of fibroid structure. It is also much more common in males than in females, in the proportion of three to one. I have never myself seen it in the female sex.

In reference to the treatment, I have very little to say for this particular case. There is but one positive cure for the growths, and that is extirpation. On account of the number and extent of the enlargements and the almost certain implication of the internal organs, that radical measure is out of the question, and we must trust to internal medication. Billroth reports a case that was much improved by arsenic. Verneuil has strongly recommended phosphorus, and mercury and potassium iodide have been suggested. Two of these remedies have been used upon our patient, and with some success, as he says himself.

As to what will be the termination [the patient having been sent out], that will be the same as usual in these cases: death from asthenia. Most cases reported have died within the first two years; only one, that I am aware of, having lived over five years.

TRANSLATIONS.

THE ORIGIN OF CANCER IN CHRONIC INFLAMMATORY CONDITIONS OF THE MUCOUS MEMBRANES AND THE SKIN.—In the *Sammlung Klinischer Vorträge*, No. 257, Dr. K. Schuchardt presents an interesting contribution to the question of the relationship of cancer to chronic epithelial irritation, especially in the form of psoriasis of the mucous membrane, paraffin-itch, and senile seborrhœa, the microscopic details of each being carefully considered.

In the first part of the essay, after referring briefly to the history of two cases of sarcoma (of the orbit and of the head of the tibia) following traumatism, the author reports four cases of psoriasis of the mouth, and especially of the tongue, which terminated in carcinoma of the mucous membrane. In a syphilitic subject presenting the same condition, cancer did not appear. Three of the former cases were inveterate smokers. In another case an epithelial cancer developed from a psoriasis præputialis of six months' standing. The patient had a tight phimosis. Microscopically, the mucous membrane affected by psoriasis showed inflammatory infiltration of the superior layers of the corium, and in the epithelium numerous nuclei in a state of active proliferation; in the superficial cells, under the horny layer, elaidin was detected.

The second part of the paper reviews briefly the reported cases of chimney-sweeps' and coal-tar- and paraffin-workers' cancer of the scrotum, and reports six cases of paraffin-cancer (one of which had been previously communicated by Tillmann). Here also did the carcinomatous degeneration proceed from long-continued irritative conditions of the skin of the body or of the scrotum alone, in the form of acne, infiltrations, exanthems, scaly and scabby formations, warty excrescences, or seborrhœa, the essential phenomena being more rapid formation of the epidermis and increased activity of the sebaceous glands. In four cases it terminated in cancer of the scrotum, with enlargement of the inguinal glands and speedy return after operation. In two cases cancer attacked the upper extremities. In the last-mentioned, Schuchardt examined the portion of the skin affected by paraffin-dermatitis and found a typical growth of the lowest epidermic layers, at the basis of warty formations epithelial nests (*schichtungs-kugeln*), in the neighborhood of which the cells were infiltrated with elaidin, dense crowding of the hair-sheaths with non-nucleated scales, and small-celled infiltration of the cutis. As an especially predisposing condition to cancer of the face was considered seborrhœa senilis. This peculiar affection, as is well known, is characterized by the appearance of usually multiple, circumscribed, prominent, yellow or brown, fatty, scaly accumulations. It especially

affects the skin of the face, but is also encountered on the thorax and neck, rarely on the extremities; almost exclusively observed in old people of the lower class. Microscopic examination discovered nothing abnormal in the sebaceous glands, while a very significant change was detected in the superior layers of the epidermis and in the hair-sheaths, terminating in partial corneous desquamation. The hair-follicles were often found entirely filled up with newly-formed epidermic scales. Here and there it was demonstrated that the secretion might have been retained, for sometimes at the root of the hair large or small drops of fat were visible underneath the scaly accumulation. The same granular fatty deposit was also found between the corneous scales themselves, pressing apart the lamellæ of epidermic growth; finally gaining the surface, it gave the fatty character to the scales.

Especially noticeable was also a marked inflammatory infiltration in the superior layers of the corium, especially in the papillæ. Apparently, want of cleanliness, besides advanced age, exerts an influence upon the origin of this disease. This accords with the predominance of the affection in subjects from the lower walks of life, among whom personal cleanliness is wanting. It is in this fact that Volkmann especially sees the explanation of the tendency to cancer of the face, and his experience harmonizes with this view, for at the most only two per cent. of all cases of cancer of the face occurred in the higher classes, who pay more diligent attention to cleanliness. After communicating a few characteristic examples of facial cancer arising from senile seborrhœa (*seborrhagische Carcinome*), Schuchardt expresses the opinion that at an earlier period of life acne sebacea and xeroderma pigmentosum may also afford occasion for the development of carcinoma.

A short reference to the prophylaxis concludes the essay. With regard to psoriasis of the tongue and mouth, the application of Pacquelin's cautery is especially recommended.—From Kramer's review in *Centralblatt für Chirurgie*, No. 40.

Chorea.—M. Joffroy treats chorea successfully with chloral hydrate and the wet sheet. The dose of chloral, for patients over ten years of age, would be one drachm, in three doses, given after meals; fifteen grains about seven in the morning, fifteen at noon, and thirty at about six o'clock in the evening. In children of six or seven years the dose must be reduced; but enough should be given to induce sleep fifteen minutes after the administration of each dose. If the choreic movements are very decided, it is recommended to wrap the child in a wet sheet for half an hour night and morning, and afterwards to have the body well rubbed with the palm of the hand. Eighteen cases reported by M. Sarie show that this treatment is of decided value. It is claimed that it reduces not only the duration but also the intensity of the disease. In the majority of cases it terminates in four to six weeks.

Periodical Amnesia and Hysteria Major in Man.—In the *Archives de Neurologie* for September, Dr. Jules Voisin reports a case of convulsive hysteria in a man 21 years of age, with doubling of the personality, in which the hysterical crises were checked by pressure upon the tendons, notably the tendo Achillis. The patient offers one of those rare and curious conditions in which the cerebral hemispheres appear to act alternately and at considerable intervals, the subject living in two states of existence entirely distinct from each other both in mental accomplishments and physical conditions. The patient had attacks of pulmonary congestion with hæmoptysis without phthisis, but evidently of neurotic origin. Some interesting observations were made as to the effects of hypnotism in provoking aphasia and hemi-catalepsy.

Copaiba Suppositories for Vaginitis.—Inflammation of the vagina, whether virulent or not, has been successfully treated by Prof. Ball with suppositories containing five grammes of copaiba and cacao-butter and five centigrammes of extract of opium, given every second day. The suppositories remain about twelve hours. The patients recover in about twenty days.—*Bull. Gén. de Thérapeutique.*

Cocaine Hydrochlorate in Sea-Sickness.—In a brief communication to the *Berliner Klinische Wochenschrift*, No. 43, Dr. W. Otto states that the use of cocaine, in doses by the mouth of gr. ¼ to ⅓, in sea-sickness will rapidly relieve vomiting and nausea and produce sleep.

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EDITORIAL.

BILIOUSNESS AND BILIOUS HEADACHE.

A NEW explanation for the familiar symptoms attending the condition known as biliousness has been offered by recent investigations in biological chemistry. Leaving out of consideration cases of simple indigestion, *embarras gastrique*, constipation, and acid conditions of the contents of the lower bowel, which in popular language are all styled "biliousness," and those nerve-storms which, taking the form of migraine, are often mistaken for bilious attacks, there yet remain many cases which are fairly attributable to some disorder of the hepatic function. Harley, for the sake of perspicuity, divides biliousness into three forms: acute biliousness, due to hypersecretion of bile; subacute biliousness, due to diminished secretion of bile; and chronic biliousness, due to imperfect secretion both as regards the quantity and quality of the bile, restricting the terms torpid or sluggish liver to the latter form. Fothergill attributes it to the effects of excess of nitrogenous food upon certain individuals, and declares, even more perspicuously, "that in all cases there is an excess of bile."* The nexus between deficient or disordered hepatic secretion, which, strictly speaking, constitutes biliousness, and the attendant clinical phenomena, seems likely to receive its true explanation from modern physiological research. That it is a form of toxæmia had already been recognized, and also that in many cases it is due to failure on the part of the liver in removing excrementitious substances from the circulating fluid. There is strong probability, however, that in other cases the liver may be only indirectly at fault. It is an important function of the bile to prevent fermentation of the contents of the intestines. Should this action be wanting, and putrefactive changes take place, all the conditions seem favorable for the development of ptomaines, which, if absorbed into the blood, may produce symptoms of acute poisoning. Lauder Brunton, in a most interesting and suggestive paper "On Poisons formed from Food, and their Relations to Biliousness and Diarrhœa,"† refers to a case reported by Lépine and Mollière, in which symptoms of acute atropine poisoning occurred, with death on the second day, in a man suffering with intestinal constriction. A peculiarly offensive fæcal mass was found in the bowel, which was believed to be the origin of the poison.

It is not only in diseased conditions that such alkaloids are formed. Bouchard extracted from human fæces a substance which, injected into rabbits, produced death by violent convulsions. He thinks that absorption may occur under certain conditions in man, and he proposes to name this condition "stercoræmia," analogous to "uræmia." Since the weight of evidence is opposed to the view that uræmia is caused by the presence of urates or urea in the blood, and as the title stercoræmia would imply the relationship of stercorin to the morbid state, one term seems at least as objectionable as the other, as implying definite ideas of pathology which have not as yet been demonstrated to be true.

Bilious headache, formerly supposed to be due to viscidity of the bile, and associated jaundice attended by more or less catarrhal swelling of the bile-ducts, seem susceptible of another explanation. The action of certain poisons may produce sim-

* Practitioner's Hand-Book of Treatment. Philadelphia, 1877, p. 37.

† Practitioner (September and October).

ilar conditions. Schmiedeberg noticed that toluylendiamine, a substance belonging to the aromatic series, produces jaundice; and Stadelmann, by whom the effects of this drug have been further investigated, found that the first stage of its action corresponded to the condition of biliousness, with excess of bile in the stools. Brunton believes that the second stage may correspond to the so-called catarrhal jaundice, especially when occurring in epidemics; though it is also possible that the usual explanation of the causation of catarrhal jaundice may be in many cases the correct one. A substance obtained from lupin-seeds has such marked power of causing jaundice that the name "ictogen" has been proposed for it by Kuhn.

Although these compounds have not yet been detected in the body or among the products of albuminous decomposition, yet similar ones, notably carbolic acid, have been found, even in the urine of healthy men. The object of immediate treatment, therefore, would be to eliminate from the intestinal tract and circulating fluids all possible sources of auto-infection, and in general to guard as much as possible against the possibility of poisoning by the products of putrefaction of the albuminous contents of the intestine. Cases of egg-poisoning and the toxic effects following the ingestion of canned beef, ice-cream, cream puffs, etc., are apposite, but cannot be further considered in this place.

THE SANITARY EXAMINATION OF POTABLE WATER.

WHILE the determination whether a sample of water does or does not contain poisonous substances of a mineral nature is not a matter of difficulty, the classification of a water as safe, suspicious, or bad, so far as its organic constituents are concerned, can, in the present state of science, only be inferred from the results of examination by several methods. Unfortunately, these methods require great nicety of manipulation and considerable skill, so that they can only be undertaken in a well-appointed laboratory.

The facts to which most importance seems to be attached are—the quantities of organic carbon and nitrogen present in the dry residue of the water, the proportion of ammonia that can be obtained from the water, the amount of potassium permanganate required to oxidize the organic matter, and the quantities of nitrites and nitrates present.

Recent reports on water-analysis point to the mere presence of nitrites as particularly suspicious; and, although a physician can rarely undertake a thorough analysis of water, there are methods by which the presence of nitrites may be quickly detected with certainty. One of these methods consists in adding to about four fluidounces of the water to be examined a few drops of pure hydrochloric acid, then about half a fluidrachm of a solution of sulphanilic acid and the same quantity of a solution of hydrochlorate of naphthylamine. The presence of nitrites is betrayed by a rosy or red color, which is developed in about twenty minutes, and the reaction will detect one part of nitrous acid in more than a thousand million parts of water. The other test is metaphenylene diamine, which produces a yellow color when added to water containing nitrites and acidulated with sulphuric acid. The first test is the more satisfactory; but it is important that the acids used in each be perfectly pure.

DR. KIJONORI KASHIMURA, Professor of the Practice of Medicine in the University of Tokio, passed through this city last week *en route* to San Francisco and Japan. He visited Pennsylvania Hospital, Jefferson College, and other places of medical interest. Prof. Kashimura founded the *Tokio Medical Journal*, and edited it for a number of years. We wish him a safe voyage.

FREE ADVICE FOR THE INSANE POOR.

THE Pennsylvania Hospital (commencing upon the 2d instant) has now a regular dispensary service for mental diseases, conducted at the Hospital for the Sick, at Spruce and Eighth Streets. On Mondays and Fridays, at 3 P.M., physicians of the Department for the Insane are regularly in attendance to give advice and medical treatment, especially in order to encourage proper treatment in the early stages. This work is of an experimental nature, and if found useful will be continued; otherwise it will be abandoned after a fair trial. We hope that it will be a permanent feature of this great charity, as, when its advantages become better known and appreciated, it will be able to render inestimable service to the insane poor.

THE Executive Committee of the International Medical Congress held a meeting at the Murray Hill Hotel, New York City, on Wednesday, the 18th instant, at which Dr. Henry H. Smith, of Philadelphia, presided. A fair attendance was had, though many of those living at a distance were absent. Among those present were Drs. Austin Flint, N. S. Davis, F. S. Dennis, and R. J. Dunglison. Dr. Dunglison is the chairman of the Finance Committee (an eminently fit nomination, which he has finally decided to accept). After filling vacancies in the *personnel* of the Sections, and transacting some private business, the committee adjourned, to meet at the call of the chairman.

AMERICAN PUBLIC HEALTH ASSOCIATION.—The Thirteenth Annual Meeting will be held at Washington, D.C., December 8–11, 1885. Transportation at reduced rates can be obtained by application to the local committee of arrangements, Smith Townsend, M.D., Chairman, and J. C. McGinn, Secretary. The meeting promises to be largely attended.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

PROF. TERRILLON, in the course of some practical remarks recently at the Salpêtrière on "Ascites with Abdominal Tumors," said that ascites, or liquid in the abdominal cavity, may be produced in three different conditions: the circulation may be *embarrassed* locally, as in some varieties of hepatic cirrhosis, or indirectly, as in heart-troubles; or the peritoneum itself may be inflamed or irritated, as when associated with abdominal tumors. In the last few years points of differential diagnosis have been elucidated. If the ascites be from obstructed circulation, the liquid will be a limpid fluid, resembling water, perhaps slightly colored, containing a little albumen, but no fibrin, and giving no sediment; containing rarely a few red globules; more often a few small white globules. If the ascites be from peritoneal inflammation, the liquid will be thinner, but never transparent, always cloudy, looking like buttermilk and smelling like decayed cheese. There is a great deal of albumen in this liquid, and of red cells and large white globules, and it deposits a thick sediment. If the effusion be from simple serous irritation, the liquid will be albuminous, rather clear, and often colored like bile. In the sediment will be found elements of great importance. Besides large white globules full of fatty granulations, large irregular cells may be seen, having a central nucleus surrounded by a quantity of granulations. The presence of these cells is usually taken as the sign of a malignant growth being present.

Besides these differential characters, M. Méhu has shown that these liquids do not give the same weight of residue. Twenty per thousand is the rate in the first kind, and forty in the second; in that accompanying ovarian cysts the figure goes up to seventy-five or eighty. One word more on the examination of the liquid: we should not at once conclude on some form of cancer if blood be in it, for we often find it in the simplest forms of irritation.

Ascites rarely accompanies simple ovarian tumors. On the other hand, it is very frequent in external papilloma which irritate the peritoneum. It is also almost always found with malignant tumors, such as sarcoma and cancer of the ovaries, intestines, etc. As a general law, it may be said that *there is no connection between the volume of a tumor and the quantity of the ascites.* One of our patients had sixteen quarts of liquid with a tumor not as large as your closed fist. The books tell of the usual symptoms by which we recognize ascites,—the large belly, the sensation of wave-motion from side to side, etc. There are, however, two modes of diagnosis

that are not much written about: first, always look for a marked dulness in the lumbar region; second, the vaginal cul-de-sac affords a good chance to detect fluid by making a vaginal or rectal examination; the liquid collects in the recto-vesical pouch and may be detected by the finger. This is, indeed, the only way to decide the diagnosis between ascites and an ovarian cyst.

Having detected the ascites, we ask what is the cause of it? There are only three ways to find out. First, examine the abdomen; then puncture, and examine the fluid; finally, make an exploratory incision. If the patient have a great deal of liquid and a small tumor, the physical examination will not reveal much. If there be only a little liquid, there are a few signs that may help; but they are not very sure. Sometimes it is possible to depress the abdominal walls and reach the tumor; there may be a real *ballottement;* and, finally, we may by vaginal examination place the tumor in communication with the abdominal walls, so that we can feel it. These means are not many nor very efficient. In making a puncture with the aspirator, we observe three rules: 1st, antisepsis of the strictest kind for the trocar and the skin of the patient; 2d, open the abdomen in the median line, to prevent wounding any large vessel; 3d, the depth to which the instrument is passed must not be great. He did not insist so much upon the second, but never neglected the first and third rules. Coming now to the third mode of diagnosis, the exploratory incision, his advice was to make an exploratory incision; then, if the operation is possible, do it; if not, close up the abdominal cavity. The question will arise about drainage. There are two opinions here; some say drain, others not. He believed both were right, and we must act according to the case. But in ascites it is hardly possible that the peritoneum will absorb a mass of liquid after the traumatism has been made: so that drainage will be necessary very often, either abdominal or vaginal.

Before leaving the Italian Medical Association meeting, held at Perugia, mention should be made of the remarkable specimens of preserved cadavers that were presented by Dr. Comi, of Rome. An entire fœtus was shown, with heads, hands, and other parts of adults that had been preserved with their natural form, color, and consistence for years,—one bust of a man since 1879.

Dr. Comi gave the following formulæ:

1. *To obtain the hardness of stone in organic bodies.*—For this purpose he mixes linseed oil and bichloride of mercury so that it will form a mass the thickness of mortar. In this he puts the parts for a number of months, varying according to the size. When they get hard enough, he washes them with turpentine and then dries in the air; afterwards they are polished with agate-stones. If the part is hollow, he fills it with a cement of plaster and bichloride of mercury, equal parts. Artificial eyes must be put in the orbits.

2. *To preserve organic bodies in a flexible state.*—All that is required is to steep them in the purest honey, the finest and clearest that can be found. The cephalic, thoracic, and abdominal cavities must be filled with tannin. The result obtained here is due to a sort of fermentation, alcoholic in its nature, that keeps the parts for a long time; afterwards they harden.

Prof. Germain Sée spoke on "Obesity" recently at the Academy. He does not believe in the Banting system; he thinks that nitrogenized substances, taken in excess, produce a certain quantity of fat. Besides, the works of Voigt, Rubner, and others prove that fat is a substance of great importance in the economy, and we are not justified in depriving our patients of it. He recommends, therefore, to our fat friends that they take fatty food, but to a less extent than the others: taking sixty to eighty grammes, in place of the one hundred and ten to one hundred and twenty that a man in good health would take. To this he adds gelatinous substances and peptones. In regard to drink, most doctors advise an almost complete abstention; but Dr. Sée does not believe in this as far as it relates to non-alcoholic drinks, such as tea, light coffee, etc. Béclard has shown that liquids do not remain in the stomach, but pass at once to the intestines. They are thus of no disadvantage to the difficult digestion of fat people, which arises from the extra coat of fat they have on their hearts. Water then, passing, as it does to be digested, into the intestine, does good, as it will increase the amount of urea eliminated, and act mechanically by washing out the body, and do good by its action on combustion in general. Sweating is only another way of suppressing water, and is of no more value in treatment of obesity. As to medication, three sorts are adopted,—iodine, the alkalies, and purgatives. Iodine acts well and makes the patients much thinner, but it is apt to cause iodism in fat people, so they ought to receive a constitutional treatment first. Alkalies are of but little value. Purgatives are useful, as they sweep very quickly out of the intestines all alimentary residue. The natural waters, as Marienbad, Carlsbad, and Châtel-Guyon, in France, are the best form in which to give cathartics.

The examination for the places annually made vacant of interne and externe in the Paris hospitals took place last week. First of all came up the women-question, the authorities having decided that ladies may try for both the interne and externe places; but the

opposition is very great. Just before the opening the male students began crying out, "No women!" "No petticoats!" Miss Blanche Edwards and Miss Plunkett sat quietly and appeared by no means disconcerted. The students filled up the time by singing in chorus to a popular air "Bamboula,"—a nickname they have given to a colored lady who is following the same curriculum as themselves, but who was not present. The authorities are firm, however, and ladies who wish to try for house-surgeon can do so: they will be subjected to the same tests as the men. A fair field and no favor is offered to all aspirants. The opening of the interne examination was the signal for another outbreak. The questions given out were the "Relations of the Stomach and Duodenum," and the "Pathological Anatomy, Symptoms, and Diagnosis of Cholera." On this a rumor went round that these questions were known to a number of the students before they were declared, and that they had been divulged by Dr. Gouguenheim, one of the jury, to some of his hospital-staff before the contest. On this, a most disorderly scene took place, the students rising *en masse* and calling for the resignation of the doctor who had told the secrets of the question-box. The meeting was adjourned at once, and on the committee making inquiry, it seems they found out that an interne in Dr. Gouguenheim's service had by some means got hold of the questions and had communicated them to others. Dr. G. protested that he had said nothing; but the authorities cancelled the first selection and nominated a fresh jury, who met yesterday, gave a new set of questions, and proceeded to a new examination.

"*Hic finis fandi.*" Here we may as well make an end of the Ferran system of inoculation. Although the report of the Madrid Royal Commission is not yet published, the most important of its conclusions are known. They are as follows. 1. The Commission affirms that Ferran's system cannot be considered as inoffensive. 2. That the liquid employed is not properly attenuated. 3. That it is impossible to form an opinion of its results from the different manner of cultivating it employed. 4. That the inoculated individual can transmit the cholera. 5. That the symptoms presented in the vaccinated cannot be considered as characteristic symptoms of experimental cholera. 6. That the inoculated person presents a special tendency to catch all sorts of diseases. 7. *That the inoculation gives no sort of immunity against the cholera.* These important statements, coming from the most eminent doctors of Madrid, show how right they were here in taking certain precautions from the first against Dr. Ferran and his system. According to a letter just received from Spain, Ferran went lately to a small place called Cambils, where up to then there had been no cholera. Soon after the inoculations, eleven deaths took place; five of them were of those who had been inoculated. Besides this, a large number of accidents from gangrene arose, and no less than eleven amputations of the arm took place! This closes the scene.

According to a St. Petersburg paper, the celebrated Russian traveller Dr. Fodtschenco recently discovered in Turkestan a plant which is said to be an excellent specific against cholera and typhus. It is used by the natives of Central Asia against all kinds of maladies, and every effort has been made to keep its properties from the knowledge of Europeans. The plant, which is named "Ferula Sumbul," has been acclimatized in the Moscow Botanical Garden, and the justly great name of Fodtschenco deserves this notice of its merits.

Dr. Audhoui recommends the following laxative powder in cases of constipation from the use of rich food:

Powdered orange-leaves, 6 parts;
" aniseed,
" sugar, of each, 2 parts;
" senna-leaves, 8 parts;
" magnesia, 2 parts;
Essence of mint, 5 drops. M.

S.—One to two tablespoonfuls to be taken in a little water.

Hæmostatic Pills (Dr. Huchard's).—

℞ Ergotin.,
Quininæ sulphatis, āā 2 grammes;
Digitalis,
Ext. hyoscyami, āā 20 centigrammes.
M. et fiat pil. xx.
S. Give five to ten daily, in any hemorrhage.

In answer to some inquiries, permit me to state that there is only one medical school in Paris, the Faculty of Medicine, and that the system of medical education adopted here is quite different from that followed in the United States and elsewhere. The professors at the school do not deliver a regular course of lectures, but take up a branch of medicine or surgery and follow it as far as possible all through from beginning to end. Prof. Sappey, for instance, will lecture all winter on a part of the lymphatic system, and the other lectures at the school itself are all lectures on special subjects. Physiology is about the only subject gone over in the year. No chemistry is taught in the laboratories. Anatomy is taught in the new dissection-rooms, and the other subjects in the hospitals. The lectures in the college-building are not much attended. Of some five thousand students registered, not two hundred attend the lectures with any regularity. Yet the instruction

given in Paris is most complete. The best medical and surgical instruction is that of the hospitals, where some twelve to fifteen clinical lectures are given daily to any one who chooses to come in. No student is compelled to attend any one course of lectures, but, on examination before the faculty, will be taken on any portion of the branch in question. Medical lectures are given at the Collége de France, by Prof. Ranvier on Histology, and by Prof. Brown-Séquard on Nervous Diseases; but this is not a medical college. Admission to listen to the debates at the many medical, surgical, and other societies is free.

PARIS, October 30, 1885.

I hasten to send, with some detail, an account of the important communication that M. Pasteur made to the Académie de Médecine on the 27th instant, as the newspapers mostly made a muddle of it. The scientific world has long been aware that Professor Pasteur was in search of a method to cure hydrophobia, and knew that his trials on dogs had been successful. M. Pasteur now comes to show his attempts on human beings. He said,—

"The prophylaxis of rabies which I have attempted to show in former communications was a real progress, but it was not entirely satisfactory, as out of twenty dogs treated I could only guarantee fifteen; but now, after a great many attempts, I have a method that is prompt and practical, and in which I have confidence in its application to all animals and to man himself. The method stands on the following facts. The inoculation of a rabbit under the dura mater (by trepanning) with a solution of the spinal marrow of a dog which has hydrophobia will always give the disease to the rabbit after an incubation of about fifteen days. Now, if the virus of this first rabbit is passed on to a second rabbit, and then to a third, and so on, there will be manifested a tendency to a diminution in the time of incubation. After twenty to twenty-five passages from rabbit to rabbit, one comes to a duration of incubation of eight days, then to one of *seven days*, and this one will remain with great regularity during a series of passages as high as ninety. This is the *practical* point of the system, as by this means one can have always on hand a virus that is constant and of perfect purity. The spinal marrow of these rabbits (which die of rabies) is all virulent and constant in its virulence. If one now detaches from these marrows some pieces a few centimetres long and then suspends them in pure air, the virulence will gradually disappear. This is the *scientific* point in the method. These facts having been established, here is the means to make a dog quite proof against hydrophobia. In a series of bottles (in which the air is kept dry with some fragments of potash in them) suspend a small piece of marrow taken from a rabbit that has died after having had hydrophobia that developed after seven days. Do this every day. Then inoculate the dog, also every day, with a syringeful of a sterilized soup in which you have mixed a small fragment of one of the marrows that are drying. You commence with a marrow that is some days old, in order not to have it too virulent. Then on the following days operate with more recent marrows, separated by an interval of two days, and so on to the last, when you use a very virulent one of the day before. The dog will then be proof against hydrophobia. You can inoculate him with the most virulent matter and he will not take hydrophobia. With this method I have protected fifty dogs, of all ages and races, without a single failure.

"On the 6th of July last I was waited upon by three persons who had just arrived from Alsace. They were Theodore Vone, a grocer, of Meissengott, who had been bitten by a mad dog on the 4th of July. His arm was much bruised, but he assured me that his clothing was not pierced by the dog's teeth, so I sent him away. The other persons were Joseph Meister and his mother. This little boy (nine years of age) had been bitten by the same dog in a very serious way, as he had wounds on his hands, his thigh, and on his legs (fourteen in all), some of them so deep that he could hardly walk. Most of the wounds had been cauterized by Dr. Weber, with carbolic-acid solution, at Villé the same evening at eight o'clock. The dog was killed by his master, and an autopsy made. His stomach was full of hay, straw, and fragments of wood, so that he was certainly mad. The boy was taken from under him, covered with blood and foam from the dog's saliva. On consultation with Professors Vulpian and Grancher, they said no doubt that the boy would have hydrophobia. Spite of all, I hesitated to subject him to the same treatment that had so well succeeded in the dogs. Afterwards, however, in presence of the two professors named, I inoculated little Meister in a fold of the skin in the right hypochondriac region. During a space of ten days the lad had thirteen inoculations. The first had been kept fourteen days, the second twelve, until at last I injected marrow from the mad animal on the same day that the creature died. Thus in the last stage of the experiment I had inoculated him with rabid virus of the most malignant type. Three months and three weeks have passed since, and the boy is quite well."

M. Pasteur, in concluding, gave the outlines of another case that he has now on hand, of a boy of fifteen who was bitten in both hands about a fortnight since. He hoped to save this patient by the same means.

M. Pasteur, in promising the Academy of Medicine to communicate to them as soon as possible the result of the case he has in hand, said further, in regard to his method, that he did not know what interpretation to give to his discovery. One mode of explanation,

that seemed strange at first sight, was that of the fact that many microbes develop a substance in themselves that will destroy them. This is so in the "aspergillus niger." It will develop a substance that is dangerous to it, if there is no salt of iron in the nutritive liquid. M. Pasteur then asks the question, "Can what constitutes the substance that causes hydrophobia consist of two distinct parts, one of which kills, as it were, the other when it is in a certain proportion?"

Long and sustained applause greeted the professor on the termination of his paper, but several members rose at once to contest its points. The President, M. Bergeron, however, put off the discussion until a future meeting. M. Guérin, however, got in a word of protest. He wished to remark that it seemed to him a sort of artificial or theoretical hydrophobia that M. Pasteur spoke of and treated, and not the real classic disease. He feared the remedy which was good in theory was perhaps not practicable for *real clinical rabies*. Nothing told him that the carbolic acid used did not save the boy.

In the Academy of Sciences Professor Vulpian spoke highly of the great discovery of M. Pasteur, and said it was a credit to France and to humanity, and that he was sure it would prevent the dreadful disease in man.

THOMAS LINN, M.D.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, NOVEMBER 5, 1885.

The President, B. F. BAER, M.D., in the chair.

LYMPHATIC LEUKÆMIA IN CHILDHOOD. BY JOHN M. KEATING, M.D.

THE short paper which by invitation I propose to read to you this evening will, I am sure, prove of interest on account of the clinical rarity of the disease and the infrequency with which we meet it in current literature. To make the subject more interesting and more lucid, at the risk of recalling to your memory matters already familiar, I will premise with a few remarks on the blood in health in children, and briefly with its diseases.

There is a uniformity of composition of healthy blood which is curious. This is brought about by that equilibrium which is so striking in textures regulated by the production and waste.

The blood-corpuscles which we are called upon to study are: 1st, the *red*, of which there are floating in the plasma about five million to the cubic millimetre. These are about $\frac{1}{3200}$ of an inch in diameter. 2d, the *white*, of a diameter of $\frac{1}{2500}$ of an inch, having the proportion of one to every three hundred or five hundred red. 3d, the nucleated red, found in the fœtus and infant, and disappearing about the third or fourth year of life. These may contain one or more nuclei, in some instances protruding from the cell. They measure from $\frac{1}{1400}$ to $\frac{1}{2000}$ of an inch. 4th, the *hæmatoblasts* of Hayem: "small, discoid, colorless, corpuscular, normal constituents of healthy blood; in drawn blood they aggregate in clumps known as Schultze's granule-masses."

As to the origin of the red corpuscles, I will quote: "They are developed from colorless corpuscles, the lymph-cells, or leucocytes. The nucleated corpuscles of the embryo also aid in the development. These nucleated cells disappear early in childhood, and are then found only in the red marrow." It is Osler's opinion that "they apparently originate from colorless marrow-cells, which gradually become more homogeneous, and hæmoglobin develops in the protoplasm, the nucleus degenerates and disappears, when the cell has the appearance of an ordinary red disc." Possibly these nucleated cells may give birth to red cells by the process of budding. The relation of the cytogenetic organs to blood-formation has always been somewhat debatable ground: the present state of our knowledge may be formulated about as follows: "The spleen certainly takes part in the development of colorless corpuscles, but its participation in red blood-formation is more doubtful; though the opinion prevails widely that the spleen is one of the important organs in the formation of red corpuscles. The evidence for this belief is of an exceedingly scanty nature.

"The lymphatic glands and adenoid tissues in other regions are the seat of constant production of colorless corpuscles, but of their relation to the red corpuscles there is the same lack of information as in the spleen."

Neumann and Bizzarzera pointed out the fact that the red marrow appears to be the seat of blood-formation. In the adult it is the only region in which embryonic or nucleated red cells are found. In the young the marrow fills the long bones.

It is Osler's opinion—and I have quoted from his recent admirable articles on this subject—that the evidence of the development of red corpuscles in the marrow rests upon the constant presence of nucleated cells infiltrated with hæmoglobin, and of their fusion. In excessive hemorrhage, natural or induced, it appears to undergo active proliferation, and it is an interesting fact to notice the marvellous rapidity with which the red corpuscles are reproduced after a hemorrhage. The amount of hæmoglobin in healthy blood, according to Preyer, is 13.45 grammes to 100. This relation is important for us to bear in mind, as it proves an index to treat-

ment. The color-test being used, I feel certain that before long it will be a matter of more than ordinary interest to the general practitioner when the means of applying the color-test shall be generally adapted, as has been done already, to daily practice.

In the new-born the blood is said to amount to one-tenth part by weight of the body; in the adult, one-twelfth to one-fourteenth. I may also note that it has been shown by Neumann that the liver in the embryo may be the seat of the formation of corpuscles, though in the adult it is the seat of their destruction.

Let us now take up the subject of anæmia in children. Were I to attempt to do justice to this condition, it would take far more time than your patience would allow. We will omit that caused by hemorrhage, by toxic agents, by mineral poisons, by miasm, by syphilis, in which we have an increase in the watery elements and a diminution in the albuminous, and consider that dependent upon disorder of the blood-making organs themselves. And here we meet with a most difficult problem. By the blood-making organs we understand the spleen, the lymphatic tissues, and the bone-marrow, remembering, of course, that some of these tissues have also to do with blood-destruction. We, however, definitely know that an increase in the cytogenetic tissues is associated with disturbances in blood-formation. The organ undergoes a hyperplasia, particularly of its fibrous constituent, and the marrow of bone changes from normal appearance to one like spleen-pulp. The blood of all patients suffering from anæmia presents a reduction in the number of red corpuscles. This is true no matter whether the seat of the trouble is located in the spleen, in the marrow of bone, or in the general lymph-glands. The white cells may or may not be increased. The clinical features of a case of anæmia will be strikingly alike, let the cause be in any one of the blood-making organs. All the more important symptoms will be present. To quote once more, such common features would be "the progressive anæmia with its group of circulatory symptoms, the irregular febrile reaction, essential fever of anæmia, the absence of marked emaciation, the tendency to effusions of serum, the progressive debility, the recurrence of hemorrhages gastric and intestinal, gastric and intestinal disturbances, and the resistance to treatment."

These affections that have so many symptoms in common are grouped as distinct diseases under the following headings: leukæmia, Hodgkin's disease (anæmia lymphatica), splenic anæmia, and idiopathic anæmia.

Leukæmia signifies a hyperplasia of the blood-making organs, with anæmia and an increase in the colorless corpuscles. Of this form we have three varieties,—the splenic, lymphatic, and medullary. Leukæmia is present at all ages, the youngest case recorded by Osler being an infant of eight months. The chief symptoms are insidious onset, anæmic appearance, bleeding at the nose or other hemorrhages, frequent diarrhœa or other gastro-intestinal disturbance. The spleen is enlarged, gradually increasing in size from the onset, and finally it may interfere with the circulation and cause difficulty of breathing by pressure. Late in the disease the liver is also enlarged. The lymph-glands in most cases are affected, and sometimes slightly enlarged. The tonsils and follicles of the pharynx are usually enlarged. The lymph-glands of the intestines and of the peritoneum are always enlarged. Fever is present, and increases as the case progresses, and is usually of the remittent type. But the most important aid to differential diagnosis is the microscopical examination of the blood. This I give in detail in the case that forms the basis of this paper, which I will now relate. I was called in consultation by Dr. I. W. Gadd, of this city, to see the child with him the latter part of last month, and the following notes were given by Dr. Gadd:

Mamie McC., aged $4\frac{5}{12}$ years, had measles when about two years old, from which she recovered without complication or sequelæ. About August, 1884, the tissue surrounding the eye became much inflamed and swollen. The swelling increased so much that the eyelid could not be opened for several days. After continued poulticing, an abscess formed and broke, discharging a quantity of pus, and continued to do so for a considerable time, but finally healed up with small scar. The child never complained, yet was pale, and did not want to play as other children did. I believe this was more due to her disposition than to the effect of any disease.

About midsummer there appeared a rash all over her body, very thick, and resembling the eruption of measles. As it matured, it was crowned by small white caps or heads. The epiderm soon came off in large patches. The child had no fever. As the eruption faded, the mother observed purplish spots, like bruises, making their appearance. These were considered by the parents to be bruises due to falls. No attention was paid to her condition until September 28, when I was called in the evening to arrest an epistaxis which had existed most of the day. I found the child lying on a sofa, though able to sit up, with blood slowly trickling from the nose. Each nostril contained a large clot. The child appeared very anæmic, with slight fever, yet did not complain of anything except weakness. The mother stated that the appetite had been very poor for some time past. The bleeding from the nose was very easily arrested by removing the clots and packing with a strip of lint in each nostril. I also gave the following internally:

℞ Acid. gallic., gr. xxx ;
Acid. sulph. dil., ℥xl ;
Ext. ergot. fl., ℥xxx ;
Syrupi, fℨj ;
Aquæ, q. s. ad fℨij. M.
Sig.—A teaspoonful in water every hour.

Also ordering her as much milk as she cared to take, with the precaution that she should sip it slowly.

Tuesday morning I saw her, and found her in the same condition, except that the epistaxis had been arrested. I thought it best not to remove the lint packing. It now being daylight, her mother called my attention to the bruise-like spots over her body. These were in size from that of a two-cent piece to that of a fifty-cent piece, and two of them, situated one over each trochanter, were as large as silver dollars. With the exception of these two, they were all, I believe, situated over the soft parts, such as over the belly of a muscle, and varying in color according to age, from a bluish black to a greenish yellow. She still had some fever, and her heart was more rapid in its action than normal: hence I gave her, in addition to the gallic acid and ergot mixture, the following:

℞ Liq. potass. cit., fℨj ;
Spts. æth. nit., fℨij ;
Tr. aconiti rad., gtt. xv ;
Syr. limonis, fℨiv ;
Aquæ, q. s. ad fℨij. M.
Sig.—Teaspoonful every two hours.

Wednesday morning I found her feeling somewhat better, though still having slight fever; pulse 124 and moderately weak in character. I did not detect any abnormal heart-sounds. I removed the lint packing without any further bleeding, and with much relief to the patient. I then ordered tincture of digitalis in three-drop doses every three hours, and also the following:

℞ Quin. sulph., gr. viij ;
Tr. ferri citro-chlorid., fℨj ;
Syr. tolu, fℨj ;
Aquæ, fℨvij. M.
Sig.—Teaspoonful every three hours.

Thursday I found the patient—to use her own language, well—evidently much better. Fever had entirely subsided ; the heart's action remained abnormally rapid. The cervical glands were slightly enlarged, but no enlargement of the tonsils and apparently no inflammation of the fauces. Treatment was continued, with the addition of more nourishing food, beef-tea, wine-whey, etc. The child seemed so much better that I said it might come to my office the next morning, instead of my going there.

Later in the same evening she took a sudden change for the worse ; but I was not sent for until Friday morning. Now the patient was suffering from high fever, 104° F. in the axilla ; pulse 134, compressible ; the cervical glands much enlarged and very hard ; the bowels had not been moved for twenty-four hours ; the tonsils were but very slightly swollen ; there were no patches in the throat. Thinking that possibly she was developing a malignant form of diphtheria, I at once put her on the calomel treatment until the bowels were moved, giving her three grains repeated in two hours, and then two grains, when the bowels were moved freely and the calomel was stopped. I also gave suppositories of two and a half grains of quinine every two hours ; also

℞ Liq. ammon. acet., fℨj ;
Spts. æth. nit., fℨij ;
Syrupi, fℨiv ;
Aquæ, fℨij. M.
Sig.—Teaspoonful every two hours.

I continued the tincture of digitalis in five-drop doses every three hours. I also applied hot flaxseed-poultices to the enlarged glands, and at noon plenty of beef-tea and milk ; but the child did not care for food, and it was difficult to get her to take any nourishment. At mid-day I noticed for the first time, although I had carefully and frequently listened before, a systolic heart-murmur. The temperature was but little affected during the night, and next morning (Saturday) at 7.30 A.M. I found it as high as ever: 104° F. in the axilla. Fearing that endocarditis had set in from the continuance of high fever and the heart-murmur, I at once applied a mustard-plaster to the pericardium, followed by a poultice, giving internally potassium iodide and ammonium carbonate, continuing the digitalis, until noon, when I met Dr. J. M. Keating in consultation.

Physical signs showed, in addition to what has been mentioned, an enlargement of the spleen ; yet there was no history of malaria. Dr. Keating did not think that endocarditis had set in, believing the murmur to be rather of a hæmic character ; yet, as a stimulant to the heart, suggested the application of a blister ; internally very small doses of Basham's mixture every three hours, with the free use of alcohol, beef-juice in small amount, etc., the temperature to be kept down to 102° or lower by means of the wet sheet. On examining a specimen of the urine which had just been passed, and the first that I had been able to obtain, I found it to be of sp. gr. 1016, of a light straw color, free from albumen and sugar. The child could not retain either medicine or beef-juice. The nose again commenced to bleed, to prevent which I again plugged the nostrils. Soon large clots of coagulated milk were vomited, the result of having been given by half-cupfuls at a time, which was entirely contrary to my direction. Her stomach soon became settled, and she took brandy and crushed ice in small quantities. We wrapped her up in a

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wet sheet and then poured cold water over her until the temperature came down to 101° in the axilla, which required about thirty-five minutes. She was then wrapped in a blanket. In two hours the temperature was again 104°. We gave several of the wet packs during the afternoon and evening, and, notwithstanding we were at the same time giving two and a half grains of quinine every hour by suppository, the same rise in temperature was observed after each. During the night she took her medicine regularly; alcohol and water and beef-tea were also administered.

Sunday morning (the day of her death) I found her to all appearance bloodless; pulse rapid and small; respiration shallow and too frequent; temperature rising to 104° after the wet pack, as before. During Saturday night she had removed the packing from the nostrils, which allowed a slight oozing of blood, and this, having been swallowed, gave rise to vomiting of clotted blood; this continued after the bleeding from the nose had been again checked, at intervals of ten to fifteen minutes, which gave me the belief that there was a slight hemorrhage into the stomach, these clots differing somewhat in form and color from those which I ascribed to the epistaxis. The heart became more rapid, 138 per minute, and the patient gradually sank. She died at 6.30 P.M., in great agony, giving two or three shrieks, which were quite loud, considering her weakened condition.

Dr. KEATING remarked that Dr. William Osler had kindly examined for him a slide of blood and reported as follows:

"Report on slide of blood sent by Dr. J. M. Keating; examination about three hours after withdrawal.—*Red corpuscles* present no special alteration in size or shape. *Colorless corpuscles* greatly increased in number, fifty or sixty in each field of the No. 7 Hartnack. They present remarkable variations in size; many are small, not more than one-third the size of the larger forms. They resemble the smaller colorless cells which Virchow has noted to be present in cases of lymphatic leukæmia. Many of the cells have feeble amœboid movements. *Nucleated red corpuscles* not observed. *Schultze's granule-masses* (often abundant in leukæmia) scanty."

The relation of the increase in number of the colorless corpuscles above noted to the increase in size of the glands and cytogenetic tissues is indeed hard to solve. The increase in size and hyperplasia of the spleen in leukæmia and anæmia are histologically identical. We must remember that the view that colorless corpuscles are changed into red corpuscles is not fully established; hence, also, that it is not proved that the excess of colorless corpuscles is due to failure in the change to red ones. In such cases the prognosis, when the disease is detected at its incipiency, may be favorable, under rigid treatment of fresh air, suitable diet, iron, quinine, and arsenic, and salt bathing; but in marked cases, that have existed for some time with advanced symptoms, the result is fatal.

Dr. GOODELL inquired if there was any distinguishing point between purpura hæmorrhagica and lymphatic leukæmia. If there is a deficiency of red blood-corpuscles, why do red patches occur so easily?

Dr. KEATING remarked that the subject under discussion was dependent upon certain conditions which physiologists are still debating. In leukæmia we have as a diagnostic feature an involvement of the lymphatic system more or less, a hyperplasia of the tonsils, lymphatic glands of the peritoneum and of the intestines, also of the spleen and bone-marrow, all of them being more or less connected with red cell-formation; but the principal diagnostic point is the increase in number of the colorless cells, as is noted in Dr. Osler's report just presented. The hemorrhages in these cases are possibly due to a diapedesis or capillary rupture. In what is known as purpura hæmorrhagica there is an exudation of blood-cells or the hæmatin from their destruction into the rete mucosum and the papillary layer of the cutis; of course, capillary ruptures may occur with profuse hemorrhage. The blood-cells (red) are usually diseased; they become crenated or they cease to form rouleaux, and possibly the plasma may be at fault. The microscope alone will reveal the distinguishing features. Purpura may be considered a symptom accompanying a dyscrasia in which the blood itself is involved, not merely the organs of its production.

(To be continued.)

CLINICAL SOCIETY OF MARYLAND.

A STATED meeting of the Society was held October 16, 1885.

Dr. N. G. KEIRLE exhibited specimens and made the following remarks on

INTUSSUSCEPTION OF THE BOWELS.

Of the entire thirty feet of intestine, no portion claims more earnest attention from the practitioner than that small segment lodged in the right iliac fossa. Here the ileum enters the cæcum, from which depends the vermiform appendix; here is the most frequent seat of intussusception; here are found typhlitis and perityphlitis, idiopathic and traumatic, with resulting abscess and imminent peritonitis, demanding timely diagnosis and prompt surgical interference. While, as has just been said, the diagnosis must be timely and action prompt, yet in no class of cases does nature sometimes wait upon art with such long-suffering patience, and often waits in vain. The following is an instructive case. The clinical notes have been

furnished by Dr. E. V. Hood, Resident Physician to the City Hospital.

Peter Dracolliano, Italian laborer, aged 27, was admitted into the City Hospital August 13, 1885. It was ascertained that, four days before, he was attacked with vomiting and pain in the belly. No diarrhœa in the beginning, but a day or two afterwards the bowels were loose and some blood was discharged with the evacuations.

Condition on Admission.—The features indicate great pain and anxiety; the tongue is dry and slightly coated; the abdomen is much swollen and tympanitic; there is slight jaundice; patient complains of constant thirst; pulse, temperature, and respiration normal. He was given twenty grains of calomel by the mouth, and an enema of soapsuds and valerian. This relieved the tympanites and pain somewhat, but the calomel failed to operate.

On the 14th another injection was given, of soapsuds and asafetida, and fifteen drops of spirits of turpentine were given internally. Relief of the abdominal distention, but no fæcal discharge, followed. The patient vomited often, the matters vomited being very offensive and of a bilious character. Complete anorexia.

August 15. No flatus or fæcal matter passed by the patient since he has been in the hospital. Hypodermic of one-half grain of morphine, with another enema of soapsuds containing some oil of peppermint.

On the 16th, the tympanites and pain extreme; patient rolling about in great agony; no stool; fæcal vomiting; extreme thirst. Half a grain of morphine hypodermatically produced some relief. At no time could any lump be detected.

The patient died at 3 A.M. of the 17th, three and a half days after admission.

"All autopsies should record conditions with a view to surgical guidance," is an injunction of Mr. Hutchinson in reference to this disorder. The following description is an attempt to comply with this injunction.

The autopsy in the above case revealed intussusception of the ileum six inches above the ileo-cæcal valve. The intussusception is nine centimetres long, and, when evolved, eighteen centimetres. Both mucous and peritoneal surfaces were dark-colored and softened, as compared (by scraping) with sound tissue. The peritoneal coat is untarnished: this condition is probably one of intense congestion. At the seat of inception (neck of the sac) is a constriction formed by a layer of lymph, which, agglutinating the adjacent peritoneal surfaces and extending into the submucous tissues, projects the mucous surface of both the entering and receiving gut. This band does not entirely encircle the gut, but, starting from its mesentery, forms about a half-circle around the intestine. It is one centimetre wide, two centimetres long, and five millimetres thick. The calibre admits the tip of the index-finger.

Placing the colon like a hose upon a water-faucet, a full stream is turned into it, and passes through the valve in this reversed direction without obstruction, but being stopped at the tip of the intussusception, which it thus fails to reduce. Reduction is, however, effected with moderate pressure upon the fluid by grasping the gut. In the process of reduction both surfaces of the gut are lacerated at the point of constriction formed by the effused lymph above referred to. When reduced, therefore, the gut shows two rents, eighteen centimetres apart, indicating the point of adhesion at the neck of the sac.

In a second case (of which the specimen was shown) nothing was known of the clinical history except that it was acute in its course. The subject was an adult male. About eleven centimetres of the ileum were intussuscepted in the cæcum. The invaginated gut lies curved like a horseshoe in the cæcum, so that it can be reposited only by immediate manipulation; neither air nor water could have effected it.

Mechanism of the Accident.—"Peyer, in 1677, asserted that intussusception was due to loss of contractile power. It is also said to be due to blows, diarrhœa, cholera, local paralysis or spasm, analogous, when in the ileo-cæcal region, to prolapse of the rectum from tenesmus.

"Leubuscher, at the suggestion of Nothnagel, made experiments upon rabbits. In twelve the intestine was compressed, but in only one was there any effect produced. In this the compressed part became entirely enclosed in the part above. In one experiment with electrical stimulation there was no effect at the point where the stimulus was applied, but at a distant part intussusception took place, the bowel being outside of the abdomen. No local cause for the invagination could be discovered: it seemed to be purely the result of vigorous peristaltic action. On the other hand, the experiments afford little support to the view that the lesion results from localized intestinal paralysis.

"In seven cases the nerve in the mesentery was cut. In two of these there was invagination to the extent of one-half centimetre; in a third invagination took place at a distance. The lower uninjured part passed into the upper paralyzed part. In man the descending form of invagination is almost invariable."

Some conjectures as to the mechanism of this accident in this situation are offered in order to evoke discussion. In the normal peristalsis, when expulsive (not propulsive), a series of transient quasi-intussusceptions, with immediate release, or some movement of this character, may occur, at least as regards the mucous layer of the intestine. If the serous and muscular coats of the ileum at

its junction with the cæcum be divided by a circular incision, the ileo-cæcal valve may be pulled out into the ileum and thus obliterated. This "valve" is merely an inflection of the mucous membrane of the ileum. If the cæcum be greatly distended with flatus, strong traction will be exerted on the mucous membrane centrifugally. Hence a concomitant bowel-disorder of this nature may be assumed to favor the production of the accident under consideration. Indeed, it would seem that both in cases of intussusception and in those in which foreign bodies lodge, there is pre-existent predisposing bowel-disorder. Intestinal invagination in the moribund is due to errors of peristalsis.

Prognosis.—Dr. J. Lewis Smith, in a most instructive article (*Amer. Journ. of Med. Sciences*, January, 1862) on intussusception in children, quotes Rilliet as asserting that ileac intussusception is very common in children, readily overcome, and seldom fatal; but when the ileum is invaginated into the colon, or the entire invagination occurs in the colon, the condition is much more grave. Of forty-eight cases, forty-five occurred in the ascending colon,—*i.e.*, ileum into cæcum, and cæcum into colon. In some cases the invagination may be so extreme that the cæcum and valve may present at the anus. Of these forty-eight cases, in seven portions of the bowel were discharged per anum and the patients recovered. The ages of the patients ranged from five to twelve years. The process of sloughing occupied, on an average, ten days. There is thus about fourteen per cent. of natural recovery from intussusception in children under twelve.

Dr. Smith remarks that in intussusception sloughing is conservative, but in hernia destructive,—*i.e.*, fatal. Abdominal section may avert the latter termination, but cannot aid the former. He expresses his views as follows: "If the tumor can readily be detected by external examination; if its position be favorable; if the patient is a robust adult, the propriety of the operation in some instances might be seriously considered; but there must be very few surgeons who would recommend it in the child under any circumstances."

Mr. Hutchinson in 1858 advised non-interference by operation; but in 1875, after a successful case of gastrotomy, he reversed his opinion. When left to nature, the mortality in intussusception is about seventy-five per cent.; according to Mr. Treves, seventy per cent. In chronic invagination, if left to nature, the mortality is eighty-six per cent.; while in chronic strangulation the mortality after operation is ninety-two per cent. (only two successful cases in twenty-seven).

It is probable that the danger from gastrotomy itself is not very great. Hence, if the diagnosis of intestinal invagination can be positively made very soon after the occurrence of the accident, the promise of a cure is increased above the twenty-five to thirty per cent. of natural recoveries. Those who would recover anyhow would thus be needlessly operated upon for the benefit of the additional successes. In the cases where sufficient time has elapsed to permit the gut to become gangrenous or adhesions to take place, nature should not be interfered with in her endeavors to restore the perviousness of the bowel. Surgical interference in this stage diminishes the patient's chances for recovery.

According to Mr. Benjamin Phillips (Erichsen's "Surgery"), gastrotomy and division of stricture are "justifiable when three or four days have passed without any relief from ordinary means, constipation being complete and vomiting of fæcal matters continuing." This limitation as to time had expired in the case related before the patient's admission.

The recoveries after operation for simple artificial anus by peritoneal section are forty-one per cent.; when done behind the peritoneum, sixty-one per cent. Hence, when possible, as perhaps in ileo-cæcal intussusception,—*e.g.*, the case from which the second specimen shown was obtained,—the operation should be through the right lumbar region, thus avoiding incision of the peritoneum, except in some anomalous cases where the entire circumference of the gut is invested by that membrane.

An intussusception which has persisted acutely for four days may be regarded as chronic.

In acute cases, when spontaneous recovery occurs, the invaginated gut is separated and extruded between the sixth and twelfth days. There are, however, cases, very subacute in character, in which a month may elapse before this occurs. A very interesting case of this nature is recorded by Dr. Woodman (*Med. Times and Gazette*, vol. ii., 1870, p. 641):

Miss H., aged 41 years, on November 19 complained of pain and tenesmus in the hypochondrium. There were bilious vomiting, tenesmus, and scanty fluid, sometimes bilious, evacuations per anum. No lump could be detected. There was no stoppage of the bowels, no stercoraceous vomiting, no violent inflammation; yet, on December 19, one month from the beginning of the attack, she passed easily from her bowels at stool nine inches of the ileum. Two years thereafter the patient is reported as continuing in good health.

A case of this kind would probably be well adapted for operation at any time; but nature, though slow, is probably the best operator.

The operation of Mr. Treves seems to be based upon the statistics of strangulated hernia, between which and intussusception there is a strong analogy,—a family likeness with features of difference. "Of 69 cases of

strangulated hernia operated upon within 48 hours, 12 died, or 1 in 5.7 (over 17 per cent.), whilst of 38 cases operated upon after 48 hours had elapsed, 15 died, or 1 in 2.5 (over 39 per cent.)."—(Erichsen's "Surgery.")

In the United States, the annual mortality from intussusception is 800, the death-rate being 70 per cent. If the analogy between the operation (laparotomy) for this condition with that for strangulated hernia is borne out in practice,—and the chances are in favor of this,—operation within forty-eight hours should reduce the mortality-rate to 17 per cent.: so that we may say that 424 lives yearly ask the profession of the United States, "What shall we do to be saved?"

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held November 5, 1885, the President, A. JACOBI, M.D., in the chair.

A SKETCH OF THE LIFE OF J. L. LITTLE, M.D., AND OF THE TWENTY-FIVE YEARS IN WHICH HE PRACTISED SURGERY IN NEW YORK.

Dr. D. B. ST. JOHN ROOSA read the paper, in which it appeared that Dr. Little was of Scotch-Irish and English ancestry; was born in Brooklyn, 1836. He received such education as the schools of his city afforded, and then became a clerk in a book-store. Here he had opportunity to read works on medicine, and later became a student under Dr. Willard Parker. He successfully passed a competitive examination, and became junior assistant in Bellevue Hospital. He graduated at the College of Physicians and Surgeons in 1860, and resigned his position at Bellevue to enter the New York Hospital, then the centre of surgery in this country. In this hospital Wright Post and Kearney Rodgers had won their fame, and here Valentine Mott, who was still living and lecturing upon surgery, had tied the arteria innominata. He was consulting-surgeon with Alexander H. Stevens, John C. Cheesman, and Alfred C. Post; the active members of the surgical staff were Gurdon Buck, John Watson, Thaddeus M. Halsted, Willard Parker, William H. Van Buren, and Thomas M. Markoe. Of all this number, only Drs. Post and Markoe survived. In those days the thermometer was not employed; pyæmia, erysipelas, and hospital gangrene were dreaded foes; and antiseptic surgery, if practised in attempts at absolute cleanliness, was not understood as now, when patients after operations are saved not as by fire, but as a matter of course. It was in the New York Hospital that Dr. Little devised his method of making and applying plaster-of-Paris splints. He reported many cases occurring in the wards in the *American Medical Times*. During the War of the Rebellion Dr. Little's services were on several occasions furnished to the government. He was clinical assistant to Dr. Parker, who was then Professor of Surgery in the College of Physicians and Surgeons. In 1863 he was appointed Lecturer in the college; his chair was enlarged in 1868 to that of Operative Surgery and Surgical Dressings. Dr. Little was popular as a lecturer; his manner was earnest and simple. After sixteen years of teaching in the College of Physicians and Surgeons, he resigned his place and became Professor of Clinical Surgery in the University of the City of New York. He became Professor of Surgery in the University of Vermont in 1875. Here he worked with great zeal and success. His "luck" became proverbial, for his operations were pre-eminently successful. Three years after his connection with the University of the City of New York, he resigned, with others, to establish the New York Post-Graduate Medical School. He was for many years surgeon to St. Luke's Hospital; in 1876 he became attending-surgeon to St. Vincent's Hospital. In August, 1884, it was discovered that he was suffering from diabetes; but he was able to continue his professional work until a few days before his decease, April 4, 1885. His fatal illness began with severe pain in the right iliac fossa, which led to general peritonitis. He passed away with the words, "I die in the Christian faith," on his lips.

Dr. PAUL F. MUNDÉ then read a paper on

ELECTRICITY AS A THERAPEUTIC AGENT IN GYNÆCOLOGY.

The author's object in bringing this paper before the profession was to make more popular a therapeutic agent which had a wide range of usefulness in gynæcology, but which was little employed. Any physician who was capable of making a correct diagnosis of his case could use the agent, but it would take more time than many specialists could devote to it. Probably not more than two cases could be disposed of in an hour. To be efficient, its use must be persisted in, and the benefit might not be apparent before some weeks. Fewer than two sittings a week would probably be of little use; they should usually be of half an hour's duration. The galvanic current had a far wider range of usefulness than the faradic. If the faradic current were employed, it would usually be beneficial in proportion to the strength of the current, but it ought not to produce great discomfort. The galvanic current should never give pain, and it was better to begin with a less powerful current and gradually increase it, but ceasing should discomfort follow. If employed intravaginally, the pole should be introduced before connecting the circuit, and the current should be diminished before withdrawing, thus avoiding pain. Usually it made little difference, in his experience, whether the one or the other pole was applied at the seat of the disease.

The following conclusions were given:

1. Electricity, locally applied, is a valuable agent in gynæcology, and should be more widely used than it is.

2. The remedy, if properly used and on correct occasions, cannot do harm.

3. It should be used only in chronic conditions; the galvanic current should not give pain.

4. The faradic current is indicated in deficient development or want of tone of the genital organs. The object of the faradic current is to stimulate the organs to increased growth and activity.

5. The galvanic current is used to promote absorption of exudative deposits, to allay pain, to excite retarded action, and occasionally to act as a caustic.

6. Perseverance is necessary to success.

7. Acute and subacute affections generally contra-indicate the use of electricity.

8. This method is often successful where other methods of treatment cannot be borne by the patient.

9. In some incurable conditions temporary improvement and relief from pain can be obtained from electricity without discomfort or danger to the patient.

The following were some of the conditions in which Dr. Mundé had employed electricity: In uterine displacements: when due to elongation of the ligaments, little effect was produced; more could be expected of the faradic current in flexions than in versions. In fibroid tumors: here his experience had been limited, but Dr. Freeman, of Brooklyn, had had successful results in three cases; in chronic pelvic cellulitis, lymphangitis, and neuralgias depending upon these conditions, the galvanic current proved of benefit in relieving pain and softening adhesions; he would not employ it in acute and subacute cases. In pachysalpingitis this method could be employed for the relief of pain and to tide the case along where it was not desirable to perform Tait's operation; in hyperplasia uteri the galvanic current would relieve reflex neuroses and diminish the size and hardness of the uterus; in subinvolution he had used the faradic current with benefit; in amenorrhœa of different forms benefit had followed the use of electricity; in deficient development of the uterus and ovaries electricity could be employed in some instances with advantage.

The paper was discussed by Dr. Freeman, Dr. Rockwell, Dr. Birdsall, Dr. Boldt, Dr. Malcolm McLean, the President, and by the author. Dr. Freeman narrated three cases, referred to by the author, in which he reduced fibroid tumors by the introduction of a needle connected with one pole of a battery into the tumor through the vagina or anterior abdominal wall; no serious reaction had followed. He now employed static electricity forty times where he employed other forms once: it had the great advantage of dispensing with disrobing the patient. The benefit derived from electricity in the relief of pain was most important. Dr. Rockwell and Dr. Birdsall were of the impression that the galvanic current would be indicated in subinvolution.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held November 11, 1885, the President, JOHN A. WYETH, M.D., in the chair.

STRANGULATED HERNIA OF LARGE SIZE.

The President presented part of the genito-urinary apparatus and about ten feet of large and small intestine, found in a double hernia, the entire tumor having measured about forty inches in circumference.

The patient was 53 years old, and was admitted to Mount Sinai Hospital October 28, 1885. He had had a rupture on the left side of seven years' duration, and had worn a truss for some time. For the past three years the scrotum had become distended, and for six months past he had experienced difficulty in micturition. He had been ruptured on the *right* side for three or four weeks. On the left side the hernia had not been reduced for three years, and had been growing larger. He had not had a free movement from the bowels for five days previous to admission. He had not vomited. There had been retention of urine for twenty-four hours. As it was evident that the patient could not recover after an operation, none was performed. Pain was relieved by opiates. He died two days after admission. The specimen was chiefly of interest because of its immense size, being the largest Dr. Wyeth had ever seen. The older hernia was smaller than the other. Dr. Wyeth had seen a similar case within twelve months, in which the hernial tumor, however, was not quite so large. As in this case, there had been no stercoraceous vomiting, and there had been slight movement from the lower portion of the gut. The second patient was 85 years of age.

MYOCARDITIS AND CHRONIC DIFFUSE NEPHRITIS, WITH OBSCURE SYMPTOMS.

Dr. John C. Peters presented microscopical slides showing chronic myocarditis, and related the history of the case of a bachelor, 67 years of age, whom he had known for the past thirty years, and who had never been really sick until the last spring, although he had had the appearance of being weakly. He was very exact in all his habits, and was perhaps too abstemious in the matter of diet. He had suffered from fever and ague in his early years, and he thought he had suffered slightly with malaria since. Last May he looked ill, suffered distress in the stomach, and shortly had considerable dyspnœa and orthopnœa. The temperature at no time rose

above 102.5°. Capillary bronchitis developed, and also pulmonary œdema to a slight extent, most marked on the left side. The symptom which gave most apprehension was the extreme weakness of the heart. The patient gradually regained his strength, but Dr. Peters and the consulting physicians diagnosticated dilatation of the right side of the heart, which disappeared later. The urine had been repeatedly examined for many years, and nothing abnormal was noticed until on this occasion, when it contained some albumen. The albumen disappeared when convalescence set in. The patient went to Saratoga, where he had a relapse, but was afterwards again able to walk some distance. Another relapse occurred, which resulted, after ten days, in death. The urine contained albumen only during the times of the relapses, and some casts (the nature of which he could not recall) were found by a microscopist. The last attack commenced with difficulty in breathing. The autopsy showed the pericardium closely adherent to the heart by old adhesions; no fluid in the sac. This attack of pericarditis could not have occurred during the past twenty years. There seemed to be some difference of opinion among those who made or saw the result of the post-mortem examination. Dr. Peters thought there was some cardiac dilatation, most marked in the left ventricle. During life they had supposed it to be in the right ventricle. The microscopical examination showed chronic interstitial myocarditis. There was some turbid serous fluid in the pleural cavities; adhesions of the apex of the left lobe; and recent bronchitis. There was diffuse interstitial nephritis, accompanied by slight tubular changes.

Dr. Waldstein remarked that we often find at post-mortem examinations the condition of the kidneys described by Dr. Peters, without there having been any history pointing to disease of those organs.

Dr. Carpenter had made the microscopical examinations, and said that, while there was chronic diffuse nephritis, the appearance of the epithelium of the kidneys would not lead one to suppose that there had been marked signs of the kidney-lesion in the urine.

DOUBLE HYDROCELE IN AN INFANT TWO MONTHS OLD.

Dr. R. Van Santvoord presented a specimen illustrating double hydrocele in an infant which had died in the asylum, aged 2 months. The hydrocele had been noticed since it was a month old. It did not communicate with the abdominal cavity.

LUPUS OF THE LARYNX.

Dr. Van Santvoord also presented the larynx of a boy, who died at 14 years of age, having had lupus commencing in the nose, destroying that organ entirely, also the upper lip, the mucous border of the lower lip, the alveolar processes between the canine teeth, the hard and soft palate. The nasal septum had fallen out; the body of the sphenoid had become bare; the pharynx was apparently not involved. In the larynx he found general thickening of the mucosa. The mucous membrane lining the ventricles and immediate neighborhood was dotted over with small, nipple-like processes. The boy had lived up to five days of death in comparative comfort; then there developed intense headache, which passed to delirium, coma, and death. The base of the brain was found coated with a thick layer of lymph, distributed about as is usually seen in tubercular meningitis, but no tubercles were found. The meningitis had arisen from extension of the diseased process from the sphenoid, the body of which had become necrotic. There were amyloid changes in the liver and stomach, but no tubercles were anywhere found. The case was also interesting in its bearing upon the alleged identity between lupus and tuberculosis. Dr. Van Santvoord thought it hardly possible that the process could have been a tubercular one, the lesions having been so extensive, and there being nowhere any tubercles.

Dr. M. Putnam Jacobi said, regarding the identity between tuberculosis and lupus, that Hueter had stated that if only one in twenty children having a localized tuberculosis was going to have general tuberculosis, it would hardly justify excision of the diseased bone. In the light of this statement it was not surprising that there was not general tuberculosis in Dr. Van Santvoord's case, although the local disease may have been of a tubercular nature.

Dr. Prudden said that if the presence of the tubercle-bacillus indicated tubercular inflammation the identity between lupus and tuberculosis had been established.

SCIRRHUS OF THE STOMACH AND TUBERCULOSIS OF THE RETRO-PERITONEAL GLANDS.

Dr. Louis Waldstein presented specimens from the body of a man who had suffered with chronic pneumonia in the left apex, the physical signs disappearing later. He was well then until two years ago, when he was taken suddenly with symptoms then regarded as intermittent fever. During the past two years this fever continued from day to day, antipyretics having no lasting effects upon the symptoms. The physician who examined the patient two years ago found a tumor in the epigastrium, a little to the right of the median line, which he regarded as cancer of the stomach, although there seemed to be no special grounds on which to base such a diagnosis. Many physicians saw the patient in consultation, who detected an intumescence in the abdomen, which seemed to be continuous with the tumor in the epigastrium. The post-mortem examination showed tuber-

culosis in the left lung. The stomach did contain a diffuse scirrhous cancer, with no tendency to ulceration: hence the absence of special symptoms of cancer. The retro-peritoneal glands were greatly enlarged, and contained much cheesy matter. There were no signs of metastasis of the carcinomatous disease in the stomach.

Dr. Peters remarked that it used to be considered that tubercle and cancer never occurred in the same patient, the one disease precluding the other.

NECROTIC CYSTITIS.

Dr. T. M. Prudden presented the bladder of a woman who died a few days after childbirth. A month previously she had paralysis of the right side of the body, and complained of pain in the back. At one time she had difficulty in urination, but lately had made water without difficulty. The urine contained albumen. Microscopical examination was not made. There were no other symptoms referable to the bladder. The post-mortem examination showed a tumor occupying the left half of the pons. There was basilar meningitis and pachymeningitis purulenta of part of the petrous and sphenoid bones. The lesion to which special attention was called was situated in the bladder, and illustrated the condition of necrotic bladder preceding the exfoliative stage.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

THURSDAY EVENING, OCTOBER 22, 1885.

The President, J. C. WILSON, M.D., in the chair.

DR. J. COLLINS WARREN read a paper on

A COMPARISON OF THE CHANGES IN ARTERIES AFTER LIGATURE AND IN THE DUCTUS ARTERIOSUS AND UMBILICAL ARTERIES AFTER BIRTH.*

DISCUSSION.

Dr. S. W. GROSS said, in view of the fact that Dr. Warren's teaching seemed so directly opposed to that of other observers, he would like to have some points cleared up. He would therefore ask if Dr. Warren held, first, that, instead of the external coat where it is included in the ligature sloughing and coming away with the ligature, the pressure of the ligature sets up an irritation which causes the adventitia to return to its embryonic state with a reconversion after the ligature has cut through this to connective tissue; and, second, whether the repair of arteries was brought about by the ingrowth of the cicatricial tissue, which he likened to provisional callus, together with some proliferation of the muscular cells of the media.

Dr. RANDALL said that, as the result of careful study of the subject, he had always found the clot present at first, and that it was honeycombed, even in the first few days, by the contraction of its fibrin: through the spaces thus formed the blood seemed to be circulating. Cells, either original white cells or of endothelial origin, occupied the walls of these cavernous spaces, and seemed to sheathe them. The red cells early melted down into a homogeneous mass, furnishing the framework upon which the reparative tissue was built. The "plastic clot" of some observers he had not seen,—the new cells being distributed throughout the old clot as well as upon the vessel-walls, and not specially collected in the immediate neighborhood of the ligature. The obliteration of the vessel was accomplished by the growth and contraction of the trabeculæ of new tissue built upon the remains of the original blood-clot. Even close to the ligature he had not found the vessel-walls greatly altered, merely showing a great increase in the nuclei and in the number and size of the vasa vasorum, the lamina elastica being distinct and, as a rule, intact. Towards the end of the first month the new tissue was largely spindle-cells, but careful staining had given no suggestion of muscular tissue. But, not having carried his study beyond the first month, he had no data upon this subject, since the development of muscular tissue is claimed to occur only at a later stage.

Dr. FORMAD was inclined to favor the views of Dr. Randall. The observation of Dr. Warren, that the new-formed connective tissue played the most important part, was to him entirely novel. He thought probably that pressure upon the artery from without, with consequent diminution in its lumen, might bring about a condition more analogous to the growth of fœtal life than to inflammation.

Dr. MEARS remarked: We are liable to be confused, in considering this subject, by the presence of the blood in the vessel. So far as the process of healing after ligature is concerned, we may consider only the structures which enter into the formation of the vessel-wall, which is complex in character and composed of connective, elastic, and endothelial tissues. Dr. Warren has given us a very clear demonstration of cicatrization as it occurs in these structures after application of the ligature.

Dr. TYSON said the most novel feature to him in Dr. Warren's observations was the part played by the muscular tissue. This apparent increase in the muscular tissue, he was inclined to believe, was really only a proliferation of intermuscular connective tissue. He was becoming more and more convinced that there was only one kind of inflammation, the interstitial. He feared that he might himself mistake a proliferating connective tissue with spindle-cells for muscular tissue. It is true that new-formed capillaries

* See summary contained in editorial on page 132.

and arterioles have muscular walls, but the development of these seemed to him to be a slower process. He had expected to find a process of repair in the ductus arteriosus different from that in an ordinary artery. This process he had expected would be a true end-arteritis, for it seems that the conditions of closure here are rather different from those in the ligaturing of an ordinary artery and in the umbilical artery, where we have also ligation practised.

Dr. WARREN, in closing, said, in cases where there is much breaking down and little repair there might be a sloughing of the external coat, yet in his experiments this part of the arterial wall did not slough, but was simply absorbed by the granulation-tissue, as is the ligature itself in some cases. In the normal condition even the elastic lamina is not a perfectly continuous plate. He did not refer to these breaks, however, but to numbers of little ruptures incident to the pulling out of the wound of an artery in the act of ligature. However, this need not necessarily occur. He had not attempted to identify anything like muscular tissue early. This could not be recognized till we had a permanent cicatrix formed. He had carefully eliminated all sources of error, and it seemed to him that in almost all cases there was a considerable number of these muscular cells. The layer was not always as well marked as in his diagrams. Especially was this true of human cases, but these had all been in alcohol for some years. Of the fresh specimens he had selected only those in which he had considered the process complete. In a specimen which he had here to-night, through an opening in the lamina elastica cells could be traced from the muscular layer, those in the inside resembling exactly those outside. These facts, together with the fact that we have normally a few muscular cells inside of the lamina elastica, led him to believe in the proliferation of the muscular tissue. The disintegration of the blood-clot is accompanied by granulations growing inward from the callus, there being two sets of blood-vessels,—one in the granulations, the other (blood-spaces, rather) in the clot itself. These unite about the end of the first or second month.

W. E. HUGHES, M.D.,
Recorder.

MEDICAL JURISPRUDENCE SOCIETY OF PHILADELPHIA.

AT the meeting of the Medical Jurisprudence Society of Philadelphia, held on Tuesday evening, November 10, Dr. John J. Reese in the chair, Thomas W. Barlow, Esq., read a paper prepared by himself and Dr. John H. Packard, entitled

ON THE EXTENSION OF PRIVILEGE TO COMMUNICATIONS BETWEEN PHYSICIAN AND PATIENT.

The object of the paper was to urge the passage of a law making the relations between physician and patient privileged, and not subject to judicial inquiry. In six of the States such a law has been upon the statute-books for many years. The New York statute, which the speaker favored, is as follows: "No person duly authorized to practise physic and surgery shall be allowed to disclose any information which he may have acquired in attending any patient in a professional character, and which information was necessary to enable him to prescribe for such patient as a physician, or to do any act for him as a surgeon."

The speaker said that the Supreme Court of the United States in a certain decision has declared, at least by indirection, that the relations of a physician and his patient are among the privileged class. A physician's office ought not to be converted into a detective bureau. The disclosure of a professional secret even under legal pressure is felt to be unprofessional and dishonorable. Under the law as at present in Pennsylvania a physician is obliged to answer questions of the most private character and concerning family secrets. The absence of such a law as is desired gives facilities to blackmail by unscrupulous physicians. The objection that such a law would prove an obstruction to the discovery of crime, it was claimed, was not well founded. The speaker had examined all the cases reported in New York since their law went into operation, fifty-seven years ago, and there was only one case where crime went unpunished, and even in that case the prisoner was afterwards convicted without the physician's testimony. The proposed law would relate only to such communications as were made in confidence to enable the physician to prescribe for the patient. Its purpose is to enable a patient to talk plainly, and the physician to invite the confidence of the patient and prevent a breach of that confidence. Knowledge gained by the physician under such circumstances should be privileged, but knowledge gained under circumstances other than for the purpose of prescribing for the patient is not, under the decisions, privileged. The courts have carefully distinguished between information disclosed to a physician necessary to enable him to prescribe and information not necessary for such a purpose. The law will inquire into the circumstances in each case, and will decide whether the physician can be made to speak. If he should obtain information respecting the criminal acts of people other than his patient, then it is his duty to disclose as to those other persons.

After a general discussion, Dr. Packard said that the experience of New York was confirmatory of the value of the law. The point of it is to secure free and unrestrained communication between physician and patient for the benefit of the latter. Doubtless in rare cases some injury might be done to the cause

of justice, but the general benefit to the whole community would more than offset a case occurring now and then. He held that a physician has duties as a citizen as well, and if he should while treating a patient come into possession of information concerning the criminal acts of others, it is his duty to disclose that a crime has been committed.

On motion, the chair appointed Dr. Packard and Mr. Barlow as a committee to report at the next meeting the best means of securing the passage of such a law. It was stated that the law which it is proposed to ask the Pennsylvania Legislature to pass is precisely like the New York law above quoted.

T. M. Daily, Esq., and S. Spencer Chapman, Esq., were elected members of the Society, and Dr. G. Milton Bradfield to the office of Recorder, in place of Dr. S. S. Cohen, resigned.

MISCELLANY.

Municipal Food-Inspection in Paris.—The same sunlight serves the just and the unjust, and the achievements of science are often as successfully applied to the purposes of fraud as to those of human progress. The scientific knowledge that gives ability to pass judgment on a substance supposed to be unwholesome or adulterated must be at least as great as that required for the selection of the adulterant, and the expense of sanitary investigations, therefore, affords a certain immunity to the unscrupulous dealer or manufacturer. Some system is therefore desirable by which an aroused suspicion may be confirmed or a guarantee of purity or wholesomeness obtained at a comparatively small cost.

In Paris this demand has been supplied since 1881 by the opening to the service of the public of the municipal laboratory established in 1878. A report of the operations of the laboratory for the first three years of its existence has recently been published, and contains detailed statements of the objects in view, the methods followed, and the expenses of the system. The *personnel* of the laboratory consists of twenty-seven chemists, including the director, M. Charles Girard, and his *sous-chef*, twenty expert inspectors, two servants, two laborers, and four clerks. The total salaries for the year 1883 amounted to one hundred and forty-seven thousand two hundred francs; this sum was swelled to two hundred and six thousand eight hundred and ninety francs by the running expenses, including porterage of samples, purchases of chemicals, glassware, and apparatus, and insurance. The future budget is estimated at two hundred thousand francs a year.

Samples sent to the laboratory for analysis are received by one of the clerks, who enters in a stub-book the character of the substance, the name and address of the sender and those of the merchant from whom it was purchased, the date, and the number of the analysis. These items are duplicated on the receipt which is detached and given to the depositor, who is told when to return for a report. The sample is correspondingly numbered and sent to one of the chemists, who examines it in its order.

Qualitative analyses—those in which only the general character of the substance is desired—are made gratuitously, and the report denominates the sample as good, passable, bad but not injurious, or bad and injurious; in most cases such a verdict can be reached only after a complete or quantitative analysis, but the detailed results are not communicated in the report. If a report giving the exact composition of the sample as shown by quantitative analysis is desired, a fee of from five to twenty francs is charged.

Samples for gratuitous analysis and those which are collected by the inspectors may also be deposited at the nearest police-station, from which regular collections are made by the laboratory wagon.

The inspectors are obliged to examine the markets and all shops in which alimentary substances are sold. They are provided with microscopes and a small case of chemical reagents. Any substance which they find to be unquestionably bad or spoiled may be destroyed on the spot; in case of suspicion two samples are taken, both of which are sealed and numbered, and certified by the signature of the dealer; one of these is sent to the laboratory, while the other is preserved for a counter expert analysis if the decision of the laboratory should be disputed. Each inspector must report at the laboratory every evening; his report is entered in the journal, and his duty is assigned for the morrow.

For the more common products the chemists employed are specialists; some are exclusively occupied in the analysis of wines, others in the examination of milk, etc., this being the only method by which indisputable results can be obtained with the necessary rapidity; but those who analyze one kind of samples are competent to examine others when occasion requires. No other information than the number of the sample and its kind is furnished the analyst, whose results are written out on special forms attached to the label of the sample, and passed to one of the clerks. They are then arranged in a stub-book, and the report is filled out, signed, and detached, and forwarded to the police-station from which the sample was received, or is retained until called for if the sample was left at the laboratory.

If a sample collected by an inspector turns out to be bad, a report with the result of the analysis is sent to the secretary-general, and the matter comes to the cognizance of the courts. The laboratory does not prosecute;

it determines only purity, alteration, or falsification; the responsibility for seizure and prosecution then rests on the courts.

In 1883, 14,686 samples were examined; of these 6749 were analyzed gratuitously for the public, 550 were paid, and the remainder were brought in by the inspectors. 7144 of the samples were wines, and 4172 were milk; then, in the order of number, come butter (364), water (255), pepper and spices (254), flour (205). Besides these analyses, which required 87,762 separate determinations of substances, 45,633 inspections were made of markets, restaurants, etc., and 1388 lots of injurious aliments were destroyed by the inspectors.

As an example of the results of the inspections and analysis, 1037 samples of milk were examined in 1881, and of these fifty per cent. were found to be fraudulent by the addition of water and removal of cream; in 1882, 2134 samples were analyzed, and the fraudulent had decreased to thirty per cent. The average daily consumption of milk in Paris is 250,000 litres; assuming that of this quantity 100,000 litres are diluted with a moderate quantity of water, say five per cent., 5000 litres of water are daily sold for milk; the resulting profit to the dealer and loss to the public would amount to one thousand francs a day, or three hundred and sixty-five thousand francs a year,—much more than the total expenses of the municipal laboratory.

In addition to the analysis of aliments, the work of the laboratory includes the examination of pharmaceutical products used in perfumery, the estimation of lead in tinned surfaces and in the solder of cans used for preserving food, the analysis of coloring-matters used for toys, bonbons, and syrups, the disinfection of lodgings and carriages which have been exposed to infectious diseases, the search for gas-leaks in cellars and sewers, and, indeed, all chemical investigations that may be of interest to the public health.

It is interesting to note that nearly all the hair-dyes, powders, cosmetics, and depilatories examined contain large quantities of mineral poisons, among which are nitrate of silver, sulphate of copper, sugar of lead, corrosive sublimate, and arsenic. Of thirty-one hair-dyes and toilet-waters analyzed, twenty-four were found to contain considerable proportions of one or more of these poisons. Two out of five face-powders are reported bad. Yet these are examples of celebrated French "toilet-necessities."

Of ninety-six specimens of toys examined sixty-four were decorated with poisonous colors, the remainder being inoffensive.

The continual increase in the number of samples examined prevents a fair estimate of the effect of the laboratory on the proportion of frauds; but a diminution is nevertheless noticeable. Since, however, the general results are not of a character to increase public faith in the commercial integrity of dealers, the publication of the percentage of bad samples has been suspended since 1882, and will probably not be resumed until there is a marked improvement.

NOTES OF AUTOPSY OF JOHN MCCULLOUGH, TRAGEDIAN.—Examination ten days after death made by Drs. Hugo Engel, Chas. K. Mills, J. H. Lloyd, J. M. Barton, W. R. D. Blackwood, and others present by invitation. Body in excellent state of preservation. The head only was examined, by special request of the relatives. No scar, depression, or marked irregularity of contour was noted as existing on either side of the calvaria. The dura mater was firmly adherent, especially along the lateral borders of the superior longitudinal sinus. In this situation, on both sides of the sinus, especially at the vertex, were observed small, white, granular masses (Pacchionian ?). No other abnormality was observed in the dura, no discoloration, thickening, or evident inflammatory change. Some of the superficial vessels, however, had rigid almost cartilaginous walls: this was especially observed in the left temporal region. No excess of cerebro-spinal fluid was found.

The large venous branches in the pia were enlarged, injected, and cord-like. The pia showed milky opacities along the course of the vessels, and over the fissures of Sylvius and Rolando. The same conditions were noticed in the pia covering the cerebellum.

Brain-structure of the convolutions firm and well preserved, but soft in the interior; the corpus callosum and ganglia were torn in removing the brain. Where the pia was most opaque the underlying cortical structure adhered to it, and came away with it when removed. This was not noted elsewhere. Deep in the fissure of Sylvius adhesions were found between the adjoining lobes. The basilar artery, both middle cerebral arteries and their branches, showed extensive degenerative changes in their walls, principally in the form of white spots which projected into the lumen of the vessels, and which were decidedly resisting to pressure. Nothing noted in large sections of the brain through the ganglia. The diagnosis made during life of paretic dementia was thought to be confirmed by the autopsy.

ARTIFICIAL LIMBS made by A. A. Marks, New York, by a peculiar method of construction, are especially noted for lightness, durability, and naturalness. Many of the limbs made by this firm have been purchased by the government for its disabled soldiers; and it is stated that one was recently fitted for the son of the President of Peru, one for a prominent surgeon of Naples, and one for an *attaché* of the Japanese legation. These limbs are made to suit all ages, and can be ordered by mail, a perfect fit being secured by measurements entered upon blanks which will be sent upon application.

M. CHARLES ROBIN, Professor of Histology at the Paris Faculty of Medicine, has just succumbed to a fit of apoplexy at the age of sixty-four years. The death of M. Robin is a great loss to science. His American students, such as Professor Flint, Jr., and many others, who have since become learned in physiology, and often had to differ with him on certain points, will deeply regret the death of the master whose works and discoveries we all have more or less benefited from. Dr. Robin instituted and filled the chair of Histology at the Paris Faculty since 1852, and was elected a member of the Academies of Medicine and Sciences in 1858 and 1866 respectively. His publications were very numerous. Of the many important works we mention "Les Fermentations," published in 1847; "Programme du Cours d'Histologie," "Traité du Microscope," and "Anatomie et Physiologie cellulaire;" then afterwards, with M. Littré, the "Dictionnaire de Médecine," etc. M. Robin, since 1875, was the Senator for the Department of the Ain, being one of the many of the French savants that society has robbed science of. T. L.

MESSRS. PARKE, DAVIS & Co., Detroit, have recently published several interesting pamphlets. One is entitled "Cocaine in Dental Surgery;" another is a working bulletin on the drug, containing a variety of original material; and a third is a well-composed collation of what has been reported about it in home and foreign medical literature.

The same firm have devised a "cocaine case," which they sell at a moderate price, and which is ingenious and convenient.

NOTES AND QUERIES.

OBITUARY.

WILLIAM BENJAMIN CARPENTER, M.D., LL.D., F.R.S., etc., the distinguished English physiologist and author, died in London November 9, from accidental burns received from a lamp which was overturned while he was taking a vapor-bath for rheumatism. He was born in Bristol, England, in 1813; was educated there, at University College, London, and at the University of Edinburgh, where he graduated in 1839, and commenced practice in Bristol. Having resolved to devote himself exclusively to scientific and literary pursuits, he removed to London in 1843, and was soon afterwards appointed Examiner in Physiology and Comparative Anatomy in the University of London, and Professor of Medical Jurisprudence in University College. These offices he held until appointed in 1856 Registrar of the University of London. He is the author of "Principles of General and Comparative Physiology," "Principles of Human Physiology," "A Manual of Physiology," "The Microscope and its Revelations," an "Introduction to the Study of the Foraminiferæ," some able papers in the "Cyclopædia of Anatomy and Physiology," in the Reports of the British Association, in the *Quarterly Geological Journal*, and in the Philosophical Transactions. In 1861 the Royal medal was awarded to him by the Council of the Royal Society, for his contributions to physiological science. In 1868 and the two following years he took a principal part in expeditions fitted out by the English government for the exploration of the deep sea, which have yielded results of great importance to physical and biological science. It was at his instance that the "Challenger" was despatched on more extended and similar researches. His reports of these expeditions are contained in the Proceedings of the Royal Society. The honorary degree of LL D. was conferred upon him by the University of Edinburgh, 1871. He was formerly the editor of the *British and Foreign Medico-Chirurgical Review*.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 8, 1885, *TO NOVEMBER* 21, 1885.

COLONEL E. I. BAILY, SURGEON.—Relieved from duty as Attending Surgeon, San Francisco, California, and ordered for duty as Medical Director, Division of the Pacific and Department of California.

LIEUTENANT-COLONEL BASIL NORRIS, SURGEON.—Ordered for duty as Medical Director, Department of the Columbia.

MAJOR J. C. MCKEE, SURGEON.—Ordered for duty as Attending Surgeon and Examiner of Recruits, Boston, Massachusetts.

LIEUTENANT-COLONEL E. P. VOLLUM, SURGEON.—Ordered for duty as Medical Director, Department of Texas.

LIEUTENANT-COLONEL J. R. SMITH, SURGEON.—Ordered for duty as Attending Surgeon, New York City, New York.

LIEUTENANT-COLONEL R. H. ALEXANDER, SURGEON.—Ordered for duty as Medical Director, Department of Arizona.
S. O. 260, A. G. O., November 11, 1885.

MAJOR ANTHONY HEGER, SURGEON.—Member of the Army Medical Examining Board now in session in New York City, is relieved from the additional duty of Attending Surgeon in that city, to take effect when Lieutenant-Colonel Joseph R. Smith, Surgeon, shall have arrived in New York and entered upon that duty. S. O. 267, A. G. O., November 19, 1885.

CAPTAIN F. W. ELBREY, ASSISTANT-SURGEON.—Sick-leave of absence further extended six months on surgeon's certificate of disability. S. O. 263, A. G. O., November 14, 1885.

CAPTAIN JOHN J. KAM, ASSISTANT-SURGEON.—Ordered for duty as Post-Surgeon, Fort Ringgold, Texas. S. O. 141, Department of Texas, November 4, 1885.

CAPTAIN NORTON STRONG, ASSISTANT-SURGEON.—Relieved from duty at Fort Union, New Mexico, and ordered for duty as Attending Surgeon, Headquarters District of New Mexico, and Post-Surgeon, Fort Marcy, New Mexico. S. O. 171, Department of Missouri, November 16, 1885.

FIRST-LIEUTENANT C. B. EWING, ASSISTANT-SURGEON.—Now at Fort Leavenworth, Kansas, ordered to proceed to Fort Reno, Indian Territory, and report to commanding officer for temporary duty in the field. S. O. 170, Department of Missouri, November 13, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM NOVEMBER 8, 1885, *TO NOVEMBER* 21, 1885.

ASSISTANT-SURGEON J. S. SAYRE.—Detached from Naval Hospital, Mare Island, and ordered to the "Omaha."

SURGEON W. S. DIXON.—Detached from Coast-Survey Steamer "Hassler" upon reporting of his relief, Passed Assistant-Surgeon D. O. Lewis, and wait orders.

PASSED ASSISTANT-SURGEON D. O. LEWIS.—Detached from Naval Rendezvous, San Francisco, and ordered to relieve W. S. Dixon, Steamer "Hassler."

MEDICAL-DIRECTOR J. S. DUNGAN.—Ordered to Naval Rendezvous, San Francisco, to relieve Passed Assistant-Surgeon D. O. Lewis.

SURGEON M. C. DRENNAN.—Ordered to Training-Ship "New Hampshire."

SURGEON H. AULICK.—Detached from Training-Ship "New Hampshire," and wait orders.

ASSISTANT-SURGEON H. H. FITTS.—Ordered to appear before Examining Board preliminary to promotion.

PASSED ASSISTANT-SURGEON C. W. RUSH.—Granted sick-leave for three months from November 20, 1885.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, DECEMBER 12, 1885.

ORIGINAL LECTURES.

INTRODUCTORY LECTURE ON TUMORS.

TUMORS—THEIR SUPPOSED ORIGIN—BICHAT'S GERMINAL LAYERS—COHNHEIM'S DEFINITION—DERMOID CYSTS—MONSTROSITIES—VIRCHOW'S CLASSIFICATION—INFLAMMATION—TRAUMATISM—HEREDITARY PREDISPOSITION.

Delivered at the College of Physicians and Surgeons, Chicago,

BY N. SENN, M.D. (MILWAUKEE, WISCONSIN),

Professor of Principles and Practice of Surgery and Clinical Surgery.

Reported by WILLIAM WHITFORD, M.D.

GENTLEMEN,—This morning we enter upon an obscure but exceedingly important field in surgical pathology, as I shall commence the subject of "Tumors." The origin of tumors has always furnished a fertile field for speculation and for the formulation of the most diverse hypotheses. By some pathologists they have been considered as one of the results of inflammation, while others referred them to a hyperplasia of mature tissue or to the presence of parasites; but recent investigations tend to show that they are invariably the result of superfluous deposits of immature or embryonic tissue. Upon this etiological hypothesis we shall base our remarks. In order to study the subject more intelligently, it is necessary for me to refer very briefly to the classification of embryonic tissue by Bichat, who recognizes three distinct germinal layers, which we will find constituting important landmarks in our study of the histology of tumors.

These layers are as follows: (1) the outer layer, or epiblast, which during the development of the embryo forms the cutaneous layer; (2) the middle layer, or mesoblast, from which various complicated histological elements are subsequently developed; and (3) the internal layer, or hypoblast, from which the mucous membrane and the glandular organs in communication with it are formed. Remember distinctly that the epiblastic tissue results in the formation of skin, the hypoblast forms the lining membrane of the alimentary canal and the glandular organs, while the mesoblast consists of a matrix from which are developed the more complicated histological elements, resulting in the formation of distinct organs and systems of organs.

Leaving all vague theories as to the origin of tumors, we will start out with the definition of Luecke, who describes a tumor as "an increase of volume by the production of new tissue without a corresponding physiological function." This description, however, fails to define accurately the boundary-line between different pathological products, leaving a somewhat vague distinction between a tumor proper and a swelling.

Cohnheim, the author of the hypothesis of the embryonic origin of tumors, defines a tumor to be "a circumscribed, atypical production of tissue from a matrix of superabundant or erratic deposit of embryonic elements." Under all circumstances, then, a tumor, according to his definition, is the result of tissue-proliferation from an embryonal matrix, originating from the epiblast, mesoblast, or hypoblast; but fixing the location of a tumor and referring its origin invariably to a matrix of pre-existing, latent, embryonal tissue. In adopting Cohnheim's classification, it becomes necessary for us to study some of the proofs on which are based his views and theories concerning the origin of tumors.

In the first place, I will call your attention to the development of special organs—the skin and its appendages—during the period of puberty. We know that certain organs up to the time of puberty remain, to a certain extent, in a dormant condition, not keeping pace with the general growth of the body; but when the period of puberty arrives, the genital organs, the skin and its appendages, suddenly are stimulated by a physiological impetus which results in increased tissue-growth. In pathology, the proof of this assertion is based on the fact that during this period certain forms of tumors, the result of epiblastic proliferation, develop themselves. There is no fact better established in pathology than that during the period of puberty there is an increased tissue-growth from the pre-existing epiblastic matrix, which results in the formation of dermoid cysts in localities where, from errors in embryological development, erratic deposits have taken place.

I call your attention to these cysts occurring in localities where, during the

development of the embryo, there is a liability of a misplacement of the epiblastic layer by dislocation and constriction. These cysts are found, as a rule, in regions where the epiblastic layer is liable to undergo great changes by indentation or inversion. If you will imagine with me, for example, the complicated processes of embryological development about the eye and neck, it is easy to understand how, during the indentations of the epiblast at those points for the future location of organs, an excessive inversion might occur, so that the erratic epiblast should insinuate itself into the tissues, and, by subsequent contraction and strangulation at the surface, become isolated and thus constitute a matrix in the neighborhood of the eye or neck for the future development of a dermoid cyst. This matrix is congenital; the embryonic cells remain in a latent condition until, during an increased physiological development, the epiblastic layer manifests itself at the age of puberty, which stimulates the latent cells to increased tissue-growth at that point, which will result in the formation of new tissue, and in this instance it gives rise to the formation of a cyst which contains all the elements of the epiblastic layer as we find it represented in true skin,—that is, hair, epithelial cells, and the products of secretion of the sebaceous and sweat glands, which we find in normal skin; the abnormal, erratic, epiblastic deposit simply being a matrix of immature, latent skin-structure. The same results of errors of embryological development we find in deeper localities of the body, especially where there is a blending between the germinal layers during embryonal growth: thus, we observe them in the sacral region and in the genito-urinary organs. In these localities we look for the growth of dermoid cysts during the period of puberty. Another variety of dermoid tumors we find about the neck, the result of incomplete obliteration of the fœtal remnant of the branchial tracts. These tumors, then, in the true sense of the word, are always congenital, inasmuch as the child is born with the matrix, which, during the increased physiological development of the epiblastic layer, results in the production of the histological elements of which the skin and its appendages are composed.

Another familiar example, substantiating the theory of the embryonal origin of tumors, we find in the pregnant uterus. As a rule, hypertrophy of tissue is produced and attended by increased physiological function. In the gravid uterus there is an increase of muscular tissue attending simply an increased physiological growth of an organ unattended by muscular contraction. How can we explain this increase of muscular tissue? During pregnancy the muscular fibres remain inactive; the uterus is engorged by an increased afflux of blood. We can only explain the attending muscular hyperplasia by assuming the presence of a superabundant deposit of embryonal cells awaiting a favorable opportunity to develop themselves into mature muscular tissue. It is not an increased activity; it is simply an increased physiological production, the development of new muscular elements from embryonal deposits, the uterus preparing itself in that way for future increased action.

Another familiar instance can be mentioned in connection with certain monstrosities (superabundant organs), which can only be satisfactorily explained by assuming that, during the period of development, at certain points there is an increased production of embryonal tissue which keeps pace with the physiological development of the body. In children born with six fingers instead of five, it follows as a necessary consequence that the supernumerary member was the result of an abnormal additional production of embryonal tissue. Monstrosities, again, are peculiar from the fact that, instead of an increased production of embryonal tissue, we observe cases where there is a lack of tissue-development from a deficiency in the pre-existing embryonal deposition, which results in a corresponding defect or absence of certain organs. Another instance where this hypothesis is well demonstrated is furnished by the so-called giant-growth, both general and local. Giants nowadays are not frequently seen, and the question arises, What is the difference in the development between an ordinary man and a giant? Giants are always born giants, although at the time of birth the size of the child may not be in excess. We have in that child a superabundance of embryonal tissue-deposits, which enables the body to develop subsequently to an unusual extent. Children are sometimes born with inequality of symmet-

rical limbs: one limb is larger than the other at the time of birth, giant-growth taking place during intra-uterine life. Friedberg observed a case where, in a female child at the time of birth, the right leg was considerably larger than the left; after birth, symmetrical development failed to take place, and the larger limb assumed giant-growth, which induced Friedberg to assert that giant-growth is not only congenital, but progressive. If the embryonal deposits are there latent, slumbering, giant-growth may take place at any subsequent period during life, awaiting a favorable opportunity until an increased afflux of blood to the part results in increased tissue-proliferation; the difference in the growth in the two limbs being due to the amount of primary deposit of embryonal tissue.

A tumor is invariably an integral part of the organism: it is not a new formation. It consists in the growth and development of pre-existing tissue-elements. In cases of dermoid cysts in man we never find heterologous structures; we always look for the products of normal tissue-proliferation. We never expect to find anything in a dermoid cyst that is not found in the normal body. While we expect in such instances to find hair or the products of epithelial proliferation and degeneration, we never find feathers or any other heterologous tissues; while in birds, when dermoid cysts arise, we find no hair, but invariably feathers: so the products of a displaced epiblastic matrix always represent normal tissue-elements in an abnormal place.

The law which governs the blood-supply of a tumor is a subject which remains to be explained by future research. All that I can tell you is that the normal supply of blood to the tissues of the body is adequate for the development and growth of a tumor. The vascular supply takes place in the same manner as during the physiological production of new tissue, as we observe it during the growth of the body or the regeneration of tissues after injury or disease, and consists simply in a development of new, or increase in size of pre-existing, blood-vessels. The vascularization of the tumor is simply a development of blood-vessels adequate to the demand of increased tissue-proliferation. The nerve-supply of a tumor is a still more important subject, and one, I may say, which is still wrapped in a great deal of obscurity. While we observe a development of increased tissue-growth independently of innervation from the cerebro-spinal axis (as in cases, for instance, of physiological development of the gravid uterus in animals where the spinal centre has been destroyed), it would appear that increased tissue-proliferation in a growth can and will result without an increased supply of nerve-elements. The study of the lymphatic system in tumors has not received the attention the importance of the subject merits. It still remains to be demonstrated by careful injections whether in certain kinds of tumors there is an increased or diminished development of the lymphatic system. The growth of a tumor depends primarily upon the amount of embryonal tissue deposited; and, secondarily, it is influenced and regulated by the amount of arterial blood supplied to the part, the tissue-growth being amenable to the same laws as govern the physiological growth and development of the body. If, by any means, either from the anatomical structure of the part, the blood-supply be scanty of the area in which the tumor grows, or local anæmia follow as the direct result of some pathological conditions, either by causing obstruction in the vessels or on account of the blood being diverted to a different part not in the immediate vicinity of the tumor, the growth of the tumor will be correspondingly slow. If, on the other hand, the tumor develop in a vascular tissue, or if the increase of arterial supply be favored by the development of additional pathological conditions in the immediate vicinity of the tumor, you would naturally expect increased tissue-growth in the tumor itself.

The retrograde changes in a tumor depend almost entirely upon its blood-supply. As long as the vascular supply can keep pace with the increased tissue-growth, just so long will the histological elements of which the tumor is composed multiply themselves. If there is an anæmia, pre-existing in the tumor or artificially induced by the production of pathological conditions which diminish the blood-supply, we may expect a retrograde transformation of the tissues *pari passu* with the diminution of the circulation. The retrograde changes most frequently observed are fatty degeneration, tyrosis, calcification, myxoid and colloid degeneration, the existing

tissue-elements undergoing a retrograde metamorphosis as the necessary result of diminished nutrition.

In differentiating between a swelling and a tumor, consider carefully the component parts of which the new formation is composed. If the swelling of an organ be the result of increased blood-supply, if it follow an acute or subacute inflammation, and be due to an increase in connective-tissue proliferation, we are dealing with a swelling, and not with a tumor from an embryonal matrix. If a tumor is never capable of performing a physiological function (in which all pathologists are agreed), an increase in the volume of an organ resulting from an increase of pre-existing normal histological elements, and attended by an increased secretion or function, is invariably a swelling and not a tumor. Again, if we have from any cause an obstruction to the exit of a physiological secretion, resulting in a distention of a pre-existing space, the swelling is a retention-cyst, and not a tumor. Such a cyst we call a retention-cyst in contradistinction to another variety of cysts, cystoma, as it simply consists in a distention of a pre-existing cavity by the accumulation of the normal physiological secretion of the part; while a tumor, on the other hand, invariably means a production of tissue-elements from pre-existing embryonal cells.

A hæmatoma, for instance, we would not call a tumor, although we find it so designated in many works on surgery, because a hæmatoma simply means an extravasation of blood into the tissues,—in other words, an accumulation of pre-existing, mature, morphological elements in the tissues. In like manner, a hydrocele is not a tumor, as the swelling results from exudation and accumulation in the serous sac of the tunica vaginalis, and is not a new formation from embryonal tissue. The term tumor, then, invariably implies an increase in volume by tissue-proliferation from an embryonal matrix.

We now come to the important subject of the

CLASSIFICATION OF TUMORS.

I will call your attention, in the first place, to the classification of Virchow, who arranged all tumors into three distinct classes, on a supposed anatomical and physiological basis. Under the name of *histioid* he included all tumors which were supposed to consist of one histological tissue-element; the second class he denominated *organoid*, on the ground that the tumors belonging to this class were composed of organs from a combination of histological elements; thirdly, the name *teratoid* included all tumors which contained a more or less perfect system of organs. Let us see if this classification will stand the test of criticism. A histioid tumor composed of only one histological element, except in cases of very minute epithelial tumors or fibromata, is an impossibility. If we have an epithelioma developing upon a mucous or cutaneous surface, it is only a histioid tumor as long as the pathological product is limited to an abnormal production of epithelial cells, but as soon as the cells have passed beyond their physiological boundary-line there is a corresponding increase in all the tissues of the part. On the other hand, an organoid tumor, no matter how perfect it may be in its anatomical structure, is always devoid of any physiological function. Anatomically, it may be perfect; physiologically, the product is invariably sterile. A teratoid tumor presents at the best only a combination of imperfect systems, which are anatomically incomplete and physiologically of no importance.

Remaining true to our hypothesis that a tumor is invariably the result of pre-existing embryonal tissue-elements, we will adhere closely to the histological structure of the part in which tumors are found, and adopt the classification of Cohnheim, who under the head of the connective-tissue type of tumors includes the following: fibroma, lipoma, myxoma, chondroma, osteoma, glioma, lymphangioma, lymphoma, and sarcoma,—tumors which grow from a matrix of embryonal connective tissue. A tumor belonging to this class, whether benign or malignant, is invariably the product of tissue-proliferation,—not from pre-existing, mature connective tissue, as we find it when it results from inflammatory processes, but as the product of tissue-growth from a pre-existing embryonal matrix. The second class embraces all tumors which are derived from the epiblast or hypoblast, represented by papilloma, epithelioma, onychoma, struma, cystoma, adenoma, and carcinoma,—which arise from a superabundant or erratic deposit of embryonal tissue: in other words,

the epithelial type represents all tumors which originally developed from a pre-existing embryonal matrix derived from the epiblast or hypoblast. A third class includes the myomata, with the varieties myoma stricellulare and lævicellulare,—that is, tumors which contain striped or unstriped muscular fibres.

Passing to the nervous system, we find that it furnishes the soil for the fourth class of tumors, the myelinic neuroma, the neuro-fibroma, and the glioma,—glioma being the result of connective-tissue proliferation in the neuroglia of the nerve-centres and the retina. You will readily understand that these four classes, based strictly upon a histological basis, represent the first two divisions according to the classification of Virchow, while the fifth, and last, class includes all the remaining tumors, which have been designated teratoid tumors by Virchow. In this class of tumors we may find all the elements resulting from a proliferation of the epiblast, hypoblast, and mesoblast; in other words, compound tumors which contain hair and the products of glandular secretion, as skin and its appendages, in cases of dermoid cysts, while others contain more complicated structures, as bone, teeth, cartilage, muscle, brain-tissue, nerves, and occasionally portions of the intestinal canal with its glandular organs. You will recollect that we defined a tumor as "an atypical production of tissue," both in the malignant and benign forms. Now, by the term "atypical" I mean the existence of heterologous or erratic tissue-elements, the term first being introduced by Waldeyer for the purpose of drawing a line of distinction between malignant and benign growths, assuming that cancer was an atypical development of epithelial cells, the result of penetration of these tissue-elements into the subjacent connective tissue where they normally do not exist. We go one step further, and apply the term to all forms of tumors. You will readily understand why: because we have taken it for granted that a tumor does not develop from mature tissue, but that it is always the result of tissue-proliferation from pre-existing, latent, embryonal cells,—cells which take no part in the normal physiological function of the part, but cells deposited during embryonal life, remaining latent, simply awaiting a favorable opportunity to develop themselves into a tumor. If a tumor, malignant or benign, grow from such a matrix, its cellular elements are always atypical. The difference between a papilloma and an epithelioma simply consists in the fact that in the former the epithelial cells occupy their normal, physiological, and legitimate position, and the tumor remains benign just so long as there is no relative change of position between the epithelial cells and the subjacent tissues. On the other hand, in carcinoma, epithelial cells are found where normally they do not exist. If, for example, in a gland of the skin there is an increased production of epithelial cells and there is no infiltration of the subjacent connective tissue, we may be satisfied that the tumor is not malignant.

There is, however, anatomically, such a thing as a non-malignant stage of cancer, in spite of its very name. In the early stage of epithelial tumors we find simply a superficial increase in the thickness of the epidermic layer,—that is the stage when the cancer still remains as a non-malignant growth; but just as soon as the physiological boundary-line between the epithelial layer and the subjacent tissues is destroyed, in other words, just as soon as epithelial elements are found in places where they have no legitimate existence, we have to deal with a cancer. The origin of tumors from erratic or superabundant deposits of embryonal tissue is the only explanation that pathology can offer why a cancer may develop in parts of the body where, normally, epithelial cells do not exist. Competent pathologists have claimed that cancer can develop only in parts normally supplied with a matrix of mature epithelial cells, while others assert that cancer has been found in parts where no epithelium can be found in a normal condition. How shall we explain this discrepancy? We offer a simple explanation in the fact that during the development of the fœtus the epiblast or hypoblast may have become displaced somewhere by an error of development, and that these epithelial cells have remained dormant until certain conditions favorable to their development should have given rise to tissue-proliferation from this embryonal matrix and the formation of an epithelial tumor. In cases of benign growth our definition holds good, inasmuch as we can in no way explain, either

from an anatomical or physiological standpoint or by way of experiment, the development of pre-existing mature tissue-cells into a tumor. The most tangible and logical explanation for the growth and development of tumors is furnished by the hypothesis that the tissue-elements of a tumor, benign or malignant, are always produced from a matrix of embryonal tissue.

In considering the exciting causes, let us pass in rapid review the effect of inflammation. Formerly, pathologists supposed that inflammation might result in the formation of a tumor; we, on the other hand, deny *in toto* the possibility of such an occurrence independently of the presence of more essential conditions. Inflammation may act simply as one of the exciting causes. If we assume that at some point we have a deposit of embryonal tissue awaiting increased vascular supply, it will furnish the necessary blood-supply for tissue-growth to take place. It may, however, favor the development and growth of a tumor in another way by producing a reduction in the normal physiological resistance in the tissues, of which we shall have more to say hereafter in discussing the conditions which are necessary to establish malignancy.

Traumatism has generally been claimed to be, in the majority of cases, one of the principal elements in the causation of tumors. We shall simply consider it in the light of an exciting cause by inducing pathological conditions favorable to tumor-growth. The statistics of Dr. Boll, collected with a view to prove the traumatic origin of cancer, show that of a large number of cases only about twelve or fourteen per cent. were traceable to this cause. Traumatism is never the essential and only cause of tumor-growth: it acts as an exciting cause by inducing inflammation, which we have mentioned as a cause favorable to growth of abnormal tissue. Prolonged irritation—pathological, mechanical, chemical, and thermal—favors the development of a tumor when acting upon a part inhabited by a deposit of embryonal tissue; but when this essential factor is absent they may result in pathological changes of various kinds, but must always fail in producing a tumor. A true tumor is neither infectious nor contagious. No surgeon has ever infected himself in operating, and all transplantations of tumor-tissue in animals have so far proved failures. The transplanted tissue may grow for a few days or weeks, when tissue-growth is arrested and the product is invariably removed by absorption.

Gastric disturbances and mental anxiety are frequently mentioned as causes of cancer, but they simply favor tumor-growth by modifying the circulation. If our hypothesis prove correct, all influences which impair the general health of the patient are incapable of transplanting embryonal tissue into the body; consequently, they are only conditions which favor tissue-growth by modifying the circulation on the one hand, and by diminishing the physiological resistance of the tissues on the other, thus acting as exciting causes in stimulating the latent cells to active proliferation. Hereditary predisposition we recognize as the principal element of the causation of tumors by assuming that a child is invariably born not with a tumor necessarily, but with a matrix from which the tumor subsequently develops itself. It is a well-recognized fact that malignant as well as non-malignant growths can often be traced to a hereditary predisposition. This predisposition does not imply that the tumor itself is congenital. All that is required is to have a matrix which is congenital, and then, by future changes which favor the development of tissue-proliferation from that matrix, the tumor is developed. The term congenital in this connection means a storage of embryonal tissue at a point from whence subsequently the tumor springs,—that is to say, the embryonal tissue-elements have been in excess or have found their way to an abnormal place, and constitute the necessary germs from which the tumor develops subsequently. Physiological growth, traumatism, inflammation, and all conditions which modify the circulation or impair nutrition, simply act as exciting causes.

In considering the influences which determine the location of tumors, there is no exception to the rule that tumors are most frequently met with in localities where during embryonal life the most complicated cell-growth is observed. This assertion is well founded, by the fact that malignant tumors have their favorite locations at the junction of the skin with the mucous membrane,—a point in the embryo where we have a blending of tissue from the epiblast, the mesoblast, and the hypoblast. For this reason, and no other, epithelial

cancer is found most frequently where the mucous membrane blends with the skin.

Chondroma never results from proliferation of mature cartilage-cells; it is invariably the result of development of tissue from immature or erratic cartilage-cells. Virchow called attention to the fact that frequently chondroma of the femur has its origin in the interior of the bone from a deposit of cartilage-cells, remnants from embryonal life.

To illustrate the difference between tumors and inflammatory swellings, let us briefly consider the enlargements of the cervical glands as they present themselves to the surgeon. We may have an enlargement of the glands from adenitis, but in this instance the swelling is caused by an exudation of the morphological elements of the blood or proliferation of pre-existing mature connective tissue, consequently it cannot be called a tumor. If the swelling be the result of a specific infection, the inflammation will give rise to specific inflammatory products, as we observe it in cases of tuberculosis and syphilis, the results of inflammation produced by the deposition of specific germs in the gland-tissue; on the other hand, enlargements which result from proliferation, not of pre-existing mature elements, but of latent embryonal deposits, are true tumors, and in this particular locality they are represented by lymphoma, lymphangioma, and sarcoma.

ORIGINAL COMMUNICATIONS

NOTES OF FOUR CASES OF EYE-INJURIES.*

BY A. FRIEDENWALD, M.D.,

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ALTHOUGH injuries to the eye are quite common in the experience of the specialist, the cases which I shall relate may prove not uninteresting to this Society, which is in the main composed of general practitioners.

Case I.—H. N., æt. 27 years, tinner, applied to me October 18, 1885, having been struck upon the eye with a piece of sharp tin while at work about a week before. He had suffered from pain almost uninterruptedly since the injury. His sight was greatly impaired immediately after the mishap, and, according to his statement, he had not been able to see anything at all from the day after up to the time of coming under observation.

On examination I found that he had only perception of light. The conjunctiva was intensely hyperæmic, the pupil widely dilated, the anterior chamber extremely shallow; the lens was opaque and swollen, and it had pushed the iris forward, and induced a high degree of intraocular pressure.

Experience teaches that this cannot be tolerated with safety for any length of time. If permitted to continue, we must expect a disastrous form of inflammation to follow, and this, together with the continued increased tension, will not only deprive the organ permanently of the visual power, but probably also leave it in an unsightly condition, and possibly in a condition that may prove inimical to the sound eye.

October 18. Having ordered opiates and other palliative treatment temporarily, I proceeded to remove the injured lens, which is the only means by which we can hope to give relief in these cases. I made a downward corneal incision with a keratome, about three lines in length, just within the pupil. The narrowed anterior chamber made a more peripheral incision almost impossible. I next placed a Daviel's curette on the lower lip of the incision, and with very slight pressure readily evacuated the whole of the injured lens.

The patient experienced immediate relief from the operation, and, although the opiates were discontinued, the pain which he had so bitterly complained of did not return. There was not the slightest untoward symptom observed during the after-treatment, and the patient was discharged in ten days with as good sight as is possible without the lens.

Case II.—P. H., æt. 27 years, oyster-shucker, presented himself for treatment on September 13, 1885, having received an injury in his right eye, while at work, about three days before. I found an irregular abrasion occupying the centre of the upper and outer quadrant of the cornea, about two lines long in its longest and about a line and a half in its shortest diameter; conjunctival hyperæmia moderate, and pain of a subdued character. Ordered atropine, and applied iodoform once daily.

* Related at the meeting of the Baltimore Medical Association, November 10, 1885.

During the first few days the corneal wound presented very little change; after which time, however, a slight suppuration manifested itself, and in the course of about a week the corneal disease had assumed the character of a serpiginous ulcer. This form of ulceration, first described by Saemisch, has the peculiarity of showing no great tendency to extend very deep in the cornea, but must be dreaded for its superficial extension over a large part of its surface, while the parts primarily affected cicatrize and leave very marked opacities behind. The continued use of iodoform did good service in this case, and brought it to a comparatively favorable termination in about three weeks.

The chief point of interest to be noticed in this case, besides the good result attributable to the iodoform, is the peculiarity of the agent through which the injury was inflicted. Oyster-packing being a very extensive branch of industry in our city, we have many opportunities to observe how exceedingly damaging a stray piece of oyster-shell is apt to prove. The subsequent trouble to be expected from a corneal abrasion received in this way is almost invariably out of proportion to the primary lesion. Such an injury is almost certain to assume a suppurative form of inflammation, and to involve a considerable part of the cornea contiguous to the original seat of injury. From the course of such injuries we are warranted in believing that, in addition to the mechanical effect, there is a septic influence at work to which the principal damage must be attributed.

Another very interesting point in connection with the case presents itself on examining the sound eye. Here is seen an irregular pupil, drawn towards a cicatricial line located in the upper margin of the cornea. His sight is perfect with this eye. On referring to my note-book, (having recognized in his name a former patient), I found that he received an injury on December 25, 1868, when he was ten years old. The accident occurred immediately after the discharge of a pistol in the hands of a young companion. Having gone out against the wishes of his parents, he tried to conceal from them the injury that he had sustained, to avoid punishment for his disobedience. When he could no longer succeed in this, he endeavored to suppress his suffering in their presence, in consequence of which medical aid was not sought till about three weeks from the date of the injury, when the long-continued pain had caused considerable constitutional disturbance. At this time I found a cicatrix at the upper and inner part of the cornea, and in the iris opposite I saw a shining foreign body which I took to be a piece of a percussion-cap.

On January 16, 1869, I made an incision in the sclero-corneal junction, and with an iris-forceps grasped the iris and the foreign body embedded in it, and, after withdrawing it, removed it with the scissors. All the troublesome symptoms disappeared from this time, and I had the satisfaction, after seventeen years, to find that the relief was permanent.

Case III.—Mr. H., aged 20, assistant to the Professor of Chemistry at the Baltimore City College. Was called by his medical attendant to see him on October 4, 1885, for an injury sustained in both eyes about four or five days before. The mishap arose from an explosion occurring in the manufacture of oxygen from potassium chlorate, mixed with what was at the time thought to be oxide of manganese, but which afterwards proved to have been powdered charcoal.

On examination, I found the right eye to have escaped serious damage. There was considerable conjunctival hyperæmia, but otherwise there was nothing to be found to cause alarm. He could not bear the light well, and the visual tests could not be very thorough; but I soon satisfied myself that the sight in this eye had not been injured.

The left eye presented a much more threatening aspect. At a point about a line and a half from the corneal margin in the inner part of the sclera, corresponding very nearly with the horizontal meridian, was seen a blackish mass about twice the size of a pin's head, which evidently had buried itself deeply in the tissues beneath. Only quantitative vision had been maintained. The pain of which the patient complained was referred specially to the eye, while pain about the brow and temple was only occasional, of short duration, and not excessive in character. The lens appeared intact, but there was a grayish reflex from the lower and outer portion of the vitreous. The ophthalmoscope failed to furnish any reflex from the

fundus oculi; the whole of the vitreous was cloudy. I had very little doubt that a part of the mass, a sample of which was still fixed in the scleral wound, had entered the vitreous. Palliative treatment was resorted to, and in the course of about a week all the active symptoms had disappeared. At this time a slight improvement in vision was observed. On holding the hands downward and inward, the fingers could be dimly seen. This slight improvement lasted but three or four days, when the condition relapsed to that previously described, in which state it has continued up to the present time.

The patient being entirely free of pain, and the eye presenting no abnormal appearance, casually examined (barring a small black spot seen where the lesion took place), had induced me to decide not to sacrifice the organ, although I fully recognized that it must be accepted as a rule that when a foreign body has entered the interior of the eye, not only is that eye doomed, but there is constant danger in store for the sound one. The peculiar character of the foreign body in this case, and the entire absence of symptoms, however, led me to hope that the injured eye will not endanger the sound one, and, as the patient can be kept under close observation, the attempt to preserve the injured eye seemed to me justifiable.

Case IV.—C. H., æt. 7 years, was struck in the left eye on June 1, 1885, with an oyster-shell. The examination revealed a cut through the cornea, about a line from its summit, extending into the sclera slightly to either side, presenting an appearance similar to that furnished by an incision made for cataract-extraction. At the inner end of the wound the iris had prolapsed. The anterior chamber was entirely filled with blood, and this prevented me from estimating to what degree the eye had really been injured, as the parts beneath were completely hidden by the accumulated blood. The pain at first was very great, but this soon yielded to the palliative treatment instituted. The treatment consisted of atropine, a protective bandage, and complete rest in bed. In about a week after the injury the anterior chamber was free from blood, notwithstanding which, however, sight had not returned, although the lens had been left intact. The wound had healed kindly, and the patient complained of no discomfort.

June 29. Prolapse very slight; ophthalmoscope gives no reflex from the fundus; no vision.

July 6. Begins to see; can count fingers at three or four feet.

July 8. Condition the same.

July 16. Can read letters of No. 8 Snellen at reading distance.

The vision constantly improved till September 22, when he read fine print readily. In the mean time, however, the inner end of the wound, where the iris had been incarcerated, had assumed a slight staphylomatous condition.

The chief interest in this case is the very good result obtained, not only in consideration of the extent of the lesion, but principally on account of the dangerous character of the weapon by which the injury was inflicted. In connection with our second case, I pointed out the danger which is to be dreaded from corneal wounds inflicted by oyster-shells. We are therefore warranted in regarding the termination in this case as an exceptionally favorable one, and are encouraged thereby not to give up all hope, even after very extensive lesions.

A CASE OF OPIUM-SMOKING.

BY J. B. MATTISON, M.D.

OPIUM-ADDICTION having its origin in a medical use of the pipe is rare. In a paper by the writer* it was asserted that cases due to a legitimate necessity, inasmuch as this therapeutical method is so limited, must be seldom or never met with. In an experience embracing the history of many habitués, no exception to this statement has been noted.

One case, however, under our care the past year, in which the form of addiction was smoking, though not caused by that, had some features that may make its recital of interest.

Mrs. A., æt. 23, married at an early age, and became the mother of two children. After the birth of the second, in 1879, she was given morphine by her medical attendant to secure sleep, and, unaware of its harmful nature, used it at irregular intervals for a year. It had then become a necessity, and was continued in daily doses of two one-eighth-grain pills at bedtime until April, 1883, when she

* "The Genesis of Opium-Addiction," *Detroit Lancet*, January, 1884.

began using the pipe at the suggestion of a friend, who commended it as preferable to the drug by the mouth.

At first, smoking was done only at bed-time, but, as usual, the demand for a more frequent supply becoming imperative, the intervals lessened until she would sometimes go without food, smoking and sleeping the twenty-four hours round.

At the time of coming under our care she was smoking only three times a day, using an unknown amount of opium, and at times increasing its effect, if occasion required, with the crude drug by the mouth.

Physical examination showed no impairment of renal, ovarian, or pulmonary functions, but the heart's action was feeble, frequent, irregular, and intermittent. Bowels torpid, appetite poor, skin pale, and memory much impaired. Albumen, sugar, and casts were absent; sp. gr. was 1018.

The pipe was at once discarded, and two grains of morphine per diem given by mouth. This proved more than enough, and was soon decreased to one grain daily; and then very gradual reductions made, averaging about one minim of Magendie daily, with generous diet and full doses of tincture of iron and nux vomica.

The new taking, with this roborant regimen, speedily brought a change for the better. Strength and appetite, notably the latter, markedly increased, and the patient's condition in every way much improved.

The opiate-quitting was attended with little reflex irritation, the most prominent being headache, not specially severe, forty-four hours after entire withdrawal. This was promptly removed by an injection of morphine, and did not return. Alvine relaxation was more marked than usual, the maximum movements in one day being ten, and then a daily decrease. No astringent was given. Vomiting occurred but once, and only one meal—evening of headache—was omitted. Patient was about each day.

The therapeutics of the case included tonics noted, daily faradic séances, morning cold shower-baths, occasional one-grain injections of cocaine to relieve fatigue or muscular aching, and fluid extract of cannabis indica to secure sleep.

The patient's need for a hypnotic ended on the tenth day. The approach of her periodical function was attended with severe pain, to relieve which hot sitz-baths, with fifteen to twenty minims of tincture of camphor, and one-sixtieth grain of atropia hypodermically, were used with success. Under this treatment she progressively improved, added nearly twenty pounds to her weight, and was dismissed recovered,—looking well, feeling well, and promising to do well.

Two or three points in this case may be briefly noted. While, in the author's method,* reliance is largely placed on bromide of sodium as a controller of reflex disorder incident to the opiate-disusing, cases sometimes present in which it is not needed. Three such have been under our care the past year: one, a lady, of short addiction, and the daily taking small; another, a gentleman (commended to us by Roberts Bartholow), several years given to morphine subcutaneously, whose physical condition was so reduced that it was contra-indicated; and the present case, in which the peculiar form of addiction led us to think the reflex irritation following withdrawal would not, as the sequel proved, be very decided. All these patients recovered.

More than the ordinary degree of alvine disturbance attended this case. Whether this were due to the lack of preliminary sedation secured by our usual giving of the bromide, or dependent upon peculiarity of the patient, is uncertain. Probably the former had more to do with it, inasmuch as an equal relaxation with the bromide is rare.

As a rule, the periodical function in smokers is not suspended. The reverse obtains in most habitués other than of the pipe. In this case, after the opiate-quitting it was unusually active, and with pain. In our experience, special treatment seldom has been called for, but, when demanded, camphor in full doses and atropine hypodermically—the latter especially commended by Anstie in peri-uterine neuralgia—served us best. Cannabis indica, as usual, proved an efficient hypnotic. Forty minims of Squibb's extract was the maximum amount required.

Opium-smoking, as a vice, has made and is making progress in this country. Law may limit it, but not until public opinion has reached the point of regarding the use of opium in any form, save to avert or control disease, as always and only an evil,—subversive of health of both body and mind,—and that, as has been well observed by recent foreign authority, "there is no such thing as moderation for habitual or even occasional employment of opiates outside of medical practice," but that the inevitable tendency is for the demand to grow by what it feeds on until it overmasters all self-effort at escape; not, we say, until laymen and doctors alike appreciate these

* "The Treatment of Opium-Addiction," Putnam's Sons, New York.

truths, and by precept and practice enforce them, can we hope that this growing evil will decline.

Opium-smoking is not likely to take high rank as a therapeutic factor. It is too cumbrous for general use, and its medical range too limited. True, it has been so advised, Dr. Thudichum* commending it in colds, hay-fever, neuralgia, etc., and asserting no danger of addiction, only those having incurable disease being unable to resist that result.

As to its remedial value, there is no question that it is much inferior to other opiate methods, and this, with added objections, supports an editorial opinion of the foreign authority mentioned,† in which, referring to the suggestion that medical men avail themselves of the pipe as a therapeutic agent, it was asserted, "We feel sure we represent the bulk of medical opinion in repudiating that suggestion."

As to no risk of addiction from smoking, that is a mistake. No form of frequent opiate-taking is free from that hazard, and the pipe especially has for many a peculiar fascination that soon makes them powerless to resist.

On the other hand, as compared with morphine hypodermically, we believe its effects, if not used to excess, less disastrous and more easily overcome, and that if an opiate be imperatively required,—from incurably painful disease or confirmed addiction,—smoking, if meeting the demand, is often better than the syringe.

304 State Street, Brooklyn.

NOTE ON THE USES OF LOBELIA INFLATA.

BY V. M. REICHARD, M.D.

LOBELIA may be used internally as a nauseant, an expectorant, an emetic, and as an antispasmodic. As a nauseant, it should be given in small doses frequently repeated. If the stomach be decidedly acid it may be very distressing: so it is safer always to administer it with a little bicarbonate of sodium. In the first stage of acute bronchitis, combined with an opiate, as paregoric, it is unexcelled. It relieves the fulness and pain, and promotes a free flow from the bronchial mucous membrane. In children troubled with a nocturnal cough and tightness of breathing, there is nothing better than tincture of lobelia in small doses. When given as an emetic, it is a good plan to give about ten drops in a wineglassful of warm water every fifteen minutes; or, with small children, give small doses and put them into a hot bath at the same time. The text-books say it is too depressing as an emetic, but I must say that, observing the precautions above mentioned, I have not found it so. In asthma, it will break up an attack at once if pushed to emesis. As an antispasmodic, especially in nervous exaltation, it is a remedy of great utility. An attack of hystero-epilepsy or of any hysterical manifestation will be cut short by it. If the patient cannot or will not swallow, it may be given by enema or hypodermically. After one or two trials of the drug, the patient will forego the hysterical attack rather than submit to the nausea. In this way I have relieved hysterical epilepsy, hysterical aphonia, and many more of the hysterical manifestations.

While it will not always cure the habit, it will relieve the symptom which so much disturbs the friends of the patient.

As a local application it has an extended use. Its value is undoubted, and, so far as I know, this is not mentioned in any of the standard text-books on materia medica. As a wash for indolent sores, as an application to traumatic erysipelas and to incised wounds, I have never found its equal. In the latter class of injuries it is especially useful. It acts as a hæmostatic and astringent. Its best application is to those wounds the edges of which can be brought together.

In any incised wound, no matter how large, or how great the hemorrhage, so long as it does not require a ligature, if the edges be brought together and held for a few minutes while a pledget of cotton wet with tincture of lobelia is applied, the hemorrhage will cease, the parts will adhere, and all will be prepared for union by the first intention. Though lobelia may not be a germicide, yet it will so entirely close up a wound as to render it perfectly aseptic. It is no longer a matter of experiment with me, but a fixed conviction, the result of observation of a great number of cases, varying from a mere scratch to severe incised wounds. In one case, a man while butchering, by a slip of the knife, cut a gash into the back of the hand

* Schmidt's Jahrbücher, 1884; New York Medical Record, September 20, 1884.

† British Medical Journal, October 17, 1885.

and the arm, beginning in the web of the thumb opposite the metacarpo-phalangeal articulation, running diagonally upward and towards the radius, extending in front about two inches above the wrist-joint. Where the knife entered the wound was quite deep, dividing the first and second extensors of the thumb. The radial artery was barely missed, and was seen pulsating in the bottom of the wound. The hemorrhage was so severe as to lead for a moment to the belief that the radial had been divided. The man positively refused to have the divided tendons sutured. The hand was put on such a splint as would support the thumb in its place, the edges of the wound approximated with adhesive strips, and the parts covered with absorbent cotton wet with a saturated tincture of lobelia. In three days union was apparently complete, but the perfection of the result was marred by the imprudence of the patient, who took off the splint and used the hand, with the result of destroying the union over the site of the divided tendons.

Any one who will try this remedy in the class of cases indicated cannot fail to be satisfied with the result.

The stigma cast upon lobelia by irregular practitioners claiming for it specific properties has caused it to be too little used by regular physicians. The remedy deserves more notice at our hands. While casting around for *new* remedies, it is proper to investigate fully the properties of those we already have. Though the active principle may be poisonous, there is not sufficient of it in a medicinal dose of the tincture to be dangerous. In a series of experiments made to determine the toxic character of this drug, I found it *impossible* to kill the animals experimented upon. Heroic doses were given to half-grown cats, with no other effect than intense nausea and weakness for a day or two. In no case would it kill, though as much as two ounces of a saturated tincture of the seed were given in the course of an hour.

FAIR PLAY, MARYLAND.

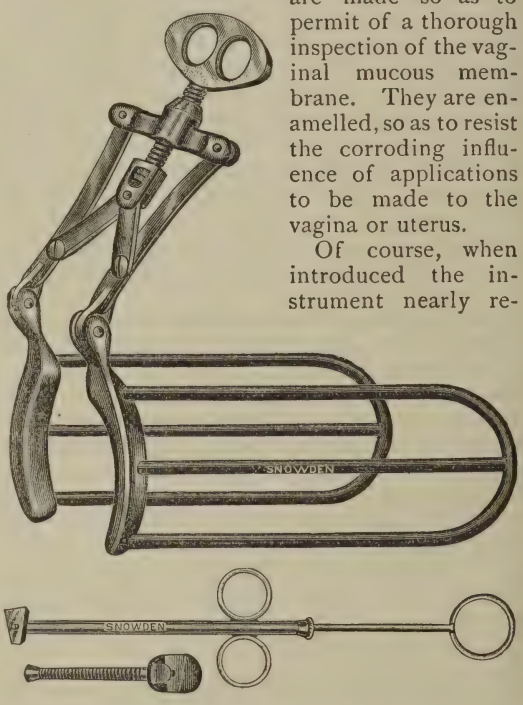
DR. WILLIAM B. ATKINSON has been appointed Special Inspector for the Delaware District of the State Board of Health of Pennsylvania.

TWO NEW INSTRUMENTS.

BY J. M. KEATING, M.D.,

Visiting Obstetrician to Philadelphia Hospital, and Lecturer on Diseases of Women and Children, etc.

I HAD recently made for me by Mr. Snowden, of this city, a form of vaginal speculum which I think has some points that will make it an available and valuable instrument to the general practitioner. As will be seen, it is a bivalve speculum, made so as to combine the greatest possible strength with the minimum weight. The instrument is adapted from Fränkel's nasal speculum. The blades are made so as to permit of a thorough inspection of the vaginal mucous membrane. They are enamelled, so as to resist the corroding influence of applications to be made to the vagina or uterus.



Of course, when introduced the instrument nearly resembles the ordinary bivalve speculum, the blades closely approximating. After sufficient dilatation has been accomplished to stretch the vagina thoroughly and bring the cervix in full view, the *mechanism* can be turned upward, on the hinge, upon the pubes or beneath the coccyx, and thus the vagina kept opened without the necessity of an assistant.

The second wood-cut represents an elastic intra-uterine pessary, which I think will prove useful in certain conditions.

It is formed of spiral wire, with an opening through its entire length. When in-

troduced into the uterine canal it will, of course, follow any curve that may exist, and will then straighten itself with gradual, persistent pressure, not sufficient to tear adhesions abruptly. In this way the condensed tissue in the crease of long-standing flexions will be made to expand gradually and the obstructed fluid-channels resume their functions; slight adhesions will be overcome.

There is another advantage which is possessed by this instrument,—that of being readily converted into a uterine repositor. By means of the attachment, which is easily made, a probe-pointed bar is passed by the thumb through the canal of the instrument, and in this way, if the instrument be in a flexed uterus, it can be straightened with just as much force as the operator chooses to use.

The tube with the bar and spring can then be detached, and the pessary allowed to remain in position; and if it is desired to convert it into a non-flexible one, a smaller bar of steel can be run through the canal of the instrument and permanently held by a screw-thread.

I have had these stems made with the button which rests upon the uterus of hard rubber, turned at the end in a flap or lip. The object of this is to catch the cotton tampon and hold it in place, and thus correct versions of the womb by this leverage. The stem can be kept at any angle to the vertical plane of the pelvis by the amount of cotton in the tampon which is caught and held by this arrangement.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

BACILLUS TUBERCULOSIS IN THE SPUTA OF AN INDIVIDUAL AFFECTED WITH GRINDER'S CONSUMPTION.

PROF. DA COSTA brought before his clinic, on the 14th ult., a man but little past middle life, who had been for many years constantly engaged as a grinder of tools, and had lived in an atmosphere full of fine particles of stone and steel.

The lecturer showed by a physical examination that the man was, without doubt, suffering with phthisis. There was no history of consumption in the family, as the father had lived to be ninety, the mother seventy, and the health of both brothers and sisters was good. And the man himself had had excellent health up to eighteen months ago. At that time he usually weighed one hundred and sixty pounds. He first had some sore throat, with a slight cough. These gradually grew worse, and in four months he was obliged to quit work. He now weighs one hundred and nineteen pounds, and expectorates constantly a large quantity of muco-purulent sputa. He had been in the hospital only a short time, and had improved some under treatment. He had had but one hemorrhage, which came about two months ago.

His chest is somewhat prominent, with depression under both clavicles. There was marked dulness below the line of the left clavicle, both anteriorly and posteriorly, attended with coarse, moist râles, chiefly expiratory, and hoarse bronchovesicular breathing. There is also dulness on the right side, from the third rib down, but less marked than that on the left, and here, too, are râles of the same character as those in the left, but more numerous and extending lower down. Vocal resonance stronger in right than in left lung, and some approach to bronchophony. Temperature in the evening 100° F. Marked clubbing of the nails, and a sluggish capillary circulation.

Prof. Da Costa, having had the sputa examined under the microscope, had found the bacillus tuberculosis present in large numbers. He called attention to the peculiar interest of this case in its bearing upon the question of the specific character of the bacillus tuberculosis, which is now attracting so much attention, and pointed out the fact that in cases of this kind, where tubercular phthisis is clearly due to the particles of stone and steel inhaled, the bacillus tuberculosis, instead of being the producing cause, is probably an after-result. This case of grinder's consumption is of especial interest as it is among the few, if not the first, in which the presence of the bacillus tuberculosis has been clearly demonstrated.

The treatment recommended was cod-liver oil, one tablespoonful three times a day, with syrup of the iodide of iron, thirty minims. For the irritating cough which was present, codeine, gr. ss three or four times in twenty-four hours, was ordered.

FRACTURE OF THE PATELLA.

Dr. Morton brought before his clinic the second case of fractured patella which he had treated with the pin lately devised by him, and which has been recently described in the *Times*.

The first case treated is now about well, showing a good result considering the amount of contusion of the parts which attended the fracture. The last patient had worn the pin only about a week, it having been put in a few days after the accident, as soon as the swelling subsided.

The lecturer believed that union of the fragments would have progressed so far in a day or two that he would be able to remove the pin and simply support the parts with a bandage until the cure should be complete. The patient was looking quite comfortable, with a prospect of an excellent result, demonstrating the value of this new device for the treatment of fracture of the patella. W. E. G.

TRANSLATIONS.

EPILEPSY DUE TO EAR-DISORDER.—Dr. Boucheron, in a contribution to the study of otopiesis, states that both in man and in animals epileptiform crises occur having their origin in some affection of the ear, or, to speak more exactly, in an excitation of the acoustic nerves.

These ear-epilepsies resemble the epilepsy, described by Brown-Séquard, which follows excitation of a sensory cutaneous nerve. In the human species, ear-epilepsy may manifest itself—

1. In infants during the evolution of the auricular affection which causes deaf-mutism. At this age the epileptiform crises are analogous to convulsive meningitiform crises.

2. In childhood, during the course of various affections of the ear accompanied by deafness, slight or profound.

3. In adult life, where ear-epilepsy (always accompanied by an affection of the ear) forms one of the varieties of late epilepsy.

Ear-epilepsy is also often observed in dogs, cats, and other domestic animals.

Auricular or ear epilepsy is characterized—

1. By epileptiform convulsions presenting all the forms occurring in pure epilepsy, with or without falling, with or without *aura*.

2. By an affection of the ear (tubo-tympanic catarrh), purulent catarrh of the tympanum, otorrhœa, impacted cerumen, lesions of the middle or internal ear, etc., with deafness more or less marked in either ear or in both ears. This is the distinctive sign of ear-epilepsy, by which it may be known from pure epilepsy.

In young children dumbness is often added to the deafness of which the epileptiform crises have been a symptom.

Ear-symptoms are often precursors of the convulsive seizures. Intelligence remains unaffected. In the cases observed by the author, the evolution of this form of epilepsy had been progressive towards cure, but with relapses corresponding with re-development of the ear-disease.

As regards their pathology, epileptiform convulsions of auricular origin have as an immediate cause an excitation, direct or reflex, of the auricular nerves,—either at their termination, along their course, at their bulbar origin, or perhaps in their inter-cerebral course,—in subjects predisposed and under certain conditions. In the same way that the epilepsy of Brown-Séquard has for its cause irritation of the trigeminal nerve, so the excitation of the sensory nerves of the ear, being transmitted to the medulla oblongata, calls into action the motor centres of this region and provokes the convulsive crises.

The source of irritation may be occlusion of the Eustachian tube, with consequent variation in the atmospheric pressure upon the membrana tympani; but a more frequent cause is impacted cerumen pressing upon the tympanic membrane. In dogs acari may be present and cause the local irritation (Nocard); but removal of the accumulation, of whatever kind, is followed by immediate cessation of the convulsions. When the source of irritation is an intracranial neoplasm, a meningitis, a necrosis of the mastoid, a hemorrhage into the labyrinth, or a suppuration or ossification of the labyrinth, auricular epilepsy may be recognized, but is not readily modified by treatment.

In conclusion, the ear may constitute, under certain circumstances, an epileptogenous zone, and the excitation of the auricular nerves may produce epileptiform crises in infancy, in childhood, and in adult life. These epilepsies of auricular origin exist also in the lower animals, such as dogs and cats.—*Revue de Thérapeutique Méd.-Chir.*, September 1.

A New Hypnotic.—Acétophênon (phényl méthyl acétone, having for its formula C_6H_5CO,CH_3), or hypnone (which is the name proposed by Dujardin-Beaumetz and Baudet), is a valuable hypnotic. According to investigations made by Papof and Neucki, this mixed acetone undergoes decomposition in the body, forming carbonic and benzoic acids, and is finally eliminated in the form of hippurates with the urine. From clinical investigations pursued by the former observers, it was found that in doses of from five to fifteen centigrammes, given with glycerin in gelatin capsules, it is well borne by the stomach, and causes a deep sleep, being thought for this purpose to be superior to chloral hydrate or paraldehyde. In doses of fifty centigrammes, when injected under the skin of guinea-pigs, it caused stupor, coma, and death in the course of five or six hours. When the remedy is continued for a number of days to patients, there is no evidence of intoleration, but the elimination of acetone by the lungs makes the breath offensive.

Hypnone is a liquid body, which, below 60° to 70° F., crystallizes in the form of white needles. It has a penetrating odor resembling both that of hydrocyanic acid and that of orange flowers. The peculiar odor makes its administration preferable in the form of gelatin capsule.

Ichthyol Plaster for Eczema.—The *Gazette des Hôpitaux* contains an article recommending the following method of treating certain inflammations of the skin. The form of a medicated pellicle, a sort of artificial epidermis, is considered more convenient to both patient and physician. The dressing comes already spread, and in the form of a plaster which needs only to be moistened with warm water in order to make it firmly adhere; it can be removed in a similar way. On the second day the dressing should be removed, and a fresh piece substituted. In cases of acute eczema (moist variety), and in all the varieties of chronic eczema, notably the eczema of the lower extremities, where the pellicle was applied in strips so as partly to overlap one another (imbricated), this treatment, aided by compression, exerted a very favorable influence; also in lichen and in prurigo good results were observed from the beginning. In some cases of psoriasis apparently good results have been obtained; but longer observation will be required to determine its real value in these cases.—*Le Progrès Médical*, No. 46.

Santonin in Amenorrhœa and in Dysmenorrhœa. — Physiological researches have shown that santonin influences the vascular system, and that it acts upon the non-striated muscle like ergot of rye and ergotin, but, unlike these, the former does not exert any injurious effect upon the stomach. The expulsion of ascarides by santonin is due to the active peristaltic movements which it causes. J. Chéron (*Revue de Thérapeutique*) claims that the action of santonin upon the vascular system, and its effects upon the muscular fibres, make it especially efficient in the treatment of those forms of amenorrhœa and dysmenorrhœa which are dependent upon adynamia, anæmia, and chlorosis, especially when the menses are as yet imperfectly established. The physiological action of santonin tends directly to remove or reduce the passive chronic congestion which determines the amenorrhœa and dysmenorrhœa in adynamic cases; and it not only relieves the utero-ovarian congestion, but acts also as a tonic to the general system. It is recommended to administer it as follows:

℞ Santonini, gr. xxx;
Glycerini, q. s.—M.
Ft. pilulæ no. 40.
S.—Take one or two pills before each meal.

Treatment of Cholera by Vesicants. —Dr. Harkin, of Belfort, in a communication to the *Revue de Thérapeutique Médico-Chirurgicale*, No. 27, declares that the disorder of the nervous system is the efficient cause of the vomiting, diarrhœa, vertigo, tremor, and muscular cramps,—the symptoms of collapse being evidently caused by an extreme irritation of the great sympathetic, while the depression of the respiratory functions and those of the circulation, through the influence of the vaso-motor nerves, constitutes the great danger of the disease. He does not find it necessary to administer remedies internally, but immediately applies an epispastic solution behind the ears and along the course of the pneumogastric nerves on the neck. From the results already obtained by this treatment the author feels warranted in recommending it for further trial by physicians living in all lands.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 12, 1885.

EDITORIAL.

THE OLDEST KNOWN ANATOMICAL PREPARATION.

THE University of Basle possesses a treasure in a skeleton prepared by no other than the founder of anatomy, Andreas Vesalius, and, as it bears the date 1543, it may be justly regarded as the oldest known anatomical preparation.

The history of this remarkable relic has recently been investigated by Professor Roth, of Basle, to whom we are indebted for a pamphlet upon the relations of Vesalius with the old Swiss town.

It is usually stated that the great anatomist paid several visits to Basle; but Dr. Roth concludes, from a careful investigation of all authorities, that his only residence was in 1543, when he came from Padua for the specific purpose of seeing his great work "*De Humani Corporis Fabrica*" through the press of Jo. Oporinus. It does not seem probable that he undertook any teaching while there; but we can well believe that students and professors were interested in the brilliant young anatomist who had even taught his great master, Sylvius, and who, scorning the prejudices of his age, had dared to study systematically the human frame, no longer relying upon cats, dogs, and donkeys. Doubtless, too, rumors had got about in the town of the great work with which the printing-presses of Oporinus were groaning, and which was destined to shatter at a blow the fetters with which for twenty centuries the doctrines of Hippocrates and Galen had bound the profession. In the sixteenth century the dissection of the human body was most reluctantly allowed by the authorities, and anatomists had to depend almost exclusively upon the lower animals for their material. Occasionally the body of a criminal was sent to the medical schools.

We can imagine the anxiety with which students and professors in Basle longed for such an opportunity to arise while Vesalius was with them. He was known to be as familiar with the parts of man as with those of a dog, and there were dark stories reported of his bold robberies of the gibbet and the graveyard. The opportunity came. On the 12th of May, Jacob Karrer was beheaded for a murderous assault upon his wife, and the body was handed over to the University to be dissected by Vesalius. As upon one occasion only, in 1531, had the dissection of a human body been allowed in Basle, we can picture the stir which such an event would create, more particularly as the demonstration was to be made by the renowned Italian professor. And, with the aid of the well-known representation, we can readily picture to ourselves the scene of the dissection, as it took place on the afternoon of the 12th of May, three centuries and a half ago. No anatomist since his time has better graced the lecture-theatre. Young and handsome, with a powerful, well-knit frame, and a strong, determined face, he was "a fluent speaker and master of an admirable style." On that day, and we may suppose for many days after, he taught to students and teachers a new anatomy, and when the dissection was completed he prepared the skeleton, and with his wonted generosity presented it to the University, where it remains to this day, in the words of the inscription, "*artis et industriæ suæ specimen.*"

No more precious gift could have been bestowed, and we find that, sixteen years later, Plater spoke of the reputation which the possession of this "anatomy" had given to his lectures. There were very few prepared skeletons in existence at the

time, and a curious instance of the estimation in which they were held is afforded by an incident in the life of Vesalius. When he went as court-physician to Madrid, Sylvius, his old master, who had relentlessly persecuted him, sent to the College of Physicians of that city and offered them a baby's skeleton if they would support him against the maligner of Galen.

The genuineness of the Basle skeleton is undoubted, as it is referred to by a succession of anatomists in the seventeenth and eighteenth centuries. Careful, indeed, should the University be of such a treasure, and proud the medical school in the possession of the only known relic of the greatest of human anatomists, the man whose daring and presumptuous spirit broke the thraldom of twenty centuries and taught men that the book of Nature was a truer guide than the books of men.

SOCIETY OF PHYSICIANS OF THE PENNSYLVANIA HOSPITAL.

ON the 17th instant will be inaugurated a new medical society, which deserves specially to be noticed. The Pennsylvania Hospital, organized in 1751, has, during the long period of its existence, not only cared for thousands of "sick and maimed and lunatics," but has also been of great service in the cause of medical education in this country. The clinical teachings given within its walls have guided medical practice in far-distant States and Territories, and, indeed, a very large proportion of the profession in the United States has walked its halls. At an early period of its existence it began its career as an educator by admitting young men, who were indentured to it for a term of years as their preceptor. Subsequent to this, as the Hospital grew and colleges sprang up, it abandoned the apprentice system and availed itself of the services of those who were already graduates in medicine, who served as resident-physicians, obstetricians,* and surgeons. At the present time, besides the physicians and assistant-physicians in charge of the male and female departments of the insane, it has an attending staff of eight surgeons and physicians, and four residents in the hospital for the sick. As many of the ex-residents and attending physicians are yet living, it has been proposed to form a society composed of the past and present medical officers of the institution, and establish an annual reunion at the old Hospital. At this meeting, to be held next week, Dr. Morton will read the annual address,† giving some curious reminiscences of the early days of the institution, and he will also exhibit some important papers which he has recently found in the archives. Short informal addresses will be made by other old residents, and the rest of the evening will be devoted to social exercises. A very pleasant reunion is anticipated.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

I MUST commence by the correction of a misstatement in my last letter. When speaking of the new Pharmacopœia, if my memory serves me aright, it was attributed to the Royal College of Physicians. This is incorrect. It is the product of the General Medical Council, a body for which no one has a good word. I dare say many of your readers do not know what this body is. It consists of representatives from the different bodies by which medical education is carried on, plus some nominees appointed by the Crown. It presides over registration; and each man, when he registers himself as a qualified practitioner, pays five pounds. Such payment is peculiarly objectionable just when a man wants every penny he can lay his hands on for other purposes, and consequently he particularly wants to see something for his money,—and what he does see is microscopically small. The Council exercises a loose supervision over medical education generally,

* The obstetrical department was closed in 1854, on account of the danger of septicæmia from the proximity of the surgical wards.

† Dr. Morton's address will appear in the next issue of the *Times*.

and looks after unworthy members of the profession when indiscreet. What the practitioner is anxious to see it do (as some practical return for the registration-fee) is to deal with the unqualified practitioner. He naturally asks, What is the good of being registered, if the unregistered are allowed to go on unchecked? It is like paying a gamekeeper and having to deal with the poacher yourself. This correction of mine is but justice to the former body, which has so little to plead for itself that the smallest injustice is a hardship for it.

We have a very extraordinary trial going on in our law courts at present which has a medical aspect. The editor of an evening daily paper wished to see a certain addition to the Criminal Acts carried through Parliament, which amendment would protect young girls against seduction by withdrawing their power of assent as regards their person until the age of sixteen is reached. Formerly a girl of twelve years could give consent, and some time ago the age was raised to thirteen. Now, juvenile depravity is so flagrant, and our streets are so crowded with child-harlots, that a number of earnest persons determined to tackle the unsavory subject. Before the close of the session society was partly amazed and partly horrified to find the business facts of brothel-keeping in all its disgusting details, especially as to the children caught for morbid lust, laid out at length in the plainest, unvarnished language. An enormous sale of the paper was the immediate result, and the prices paid for some copies were fabulous. No decent woman could pass along certain thoroughfares for the hoarse cries of jail-birds hawking this terrible literature. Thousands and thousands of copies were sold, and read by old and young alike. Children got hold of them, and became familiar with details of a most undesirable character for them, —or, indeed, for any one. It is not too much to say that a wave of psychical uncleanness has passed over the minds of the young of this generation which will leave its dirty drift on their minds for the rest of their lives; and whether the good which has resulted therefrom—viz., passing the Amendment to the Criminal Acts—will counterbalance the undoubted evil wrought remains to be seen.

One pathetic story was told of a child procured for seduction which gave a horrible shock to every reader. She was procured from her parents by fraudulent pretext, examined by a midwife, pronounced a virgin, and then left in a bedroom alone, where soon she found a strange man in the room. She screamed in terror, begging to be taken to her mother, but soon her screams were hushed. Here the relation stopped; but the preceding explanations left no shadow of doubt as to the rest.

The editor of the newspaper pledged his word for the absolute accuracy of every detail in his long list of iniquities. A commission of notables, including the Archbishop of Canterbury, sat *in camerâ* on the said details, and pronounced in their favor. The story of the poor little girl was in every one's mouth, and a mother whose child had been taken away, as she understood, to domestic service on the date given (the eve of the Derby day), began to suspect that her daughter was the child-actor in this harrowing scene. She made a stir in the matter, went to a police court, and strove to recover her child. The Salvation Army—a curious medley of fanatics, idlers, and enthusiasts—had taken an active part in the inquiry, and it turned out that one of this gang, a converted harlot and brothel-keeper, had been utilized to procure a young girl under the pretence that she needed a little girl to help her in her house-work. Further, it appeared that the child was taken away to France after the alleged outrage, and when the mother applied to one of the leaders of the Salvation Army to recover her daughter she was refused.

At last the child was restored to her mother, and with this commenced a new phase and aspect of the business. Many people felt that no motive, however excellent, could justify the abduction of a child from her home on false pretences, the subjection of her to an indecent assault, and the administration of a noxious drug (chloroform) against her will. So the public prosecutor came upon the scene and indicted the whole lot concerned,—the gentleman who planned the investigation, and who called himself "the chief director," the converted courtesan and procuress who got hold of the child, the midwife who assaulted her, and the Salvation Army gentleman who took possession of the child. They were a motley lot, and the court was crammed to hear the case, and every scrap of information as to what went on was snapped up by the newspapers and spread broadcast over the land.

A change of front was now executed, and the defence made was that the action taken was to rescue the child from a life of infamy. After taking all care to secure an untainted child, and putting forward as their original object the demonstration of how easy it was to procure a pure child for an infamous purpose, this change was rather a surprise to most persons. The defendants attacked the character of the child's mother, who, it appears, got drunk the night her daughter left her, after having been struck by her husband for letting her go. But the mother stood her own gamely, admitting her faults, but declaring her inability to see why the abduction of her child was to be justified on that account. The father's character came out unblemished. A great deal of the life of doubtful characters in a humble condition of life was laid bare in cross-examination, which gratified the prurient curiosity of many persons without any equiv-

alent good being done. To blacken the characters of the relations and friends of the child did little to vindicate the abduction; and the plea of motive, urged vehemently, did not find favor in the eyes of the legal luminaries engaged in the trial. The chief director preferred to defend himself, and of course committed much irregularity, for which the presiding judge had to check him. The procuress swore she bought the child with money down from her mother, with the latter's full cognizance of what she really was wanted for; which was quite a new turn of affairs, and in conflict with what had been sworn at first, and not at that time contradicted. Then she admitted that she had sworn lies about her past life, for which she will probably have to stand her trial for perjury when the present case is over.

The trial has created the greatest excitement, and familiarized the public mind with every minutia in connection with defloration and the life of those who live by pandering to libidinous appetites. Betwixt the first examination before the police magistrate and the trial itself, the chief director made a tour in the North of England, where he was enthusiastically received by those fanatics who disbelieve in the Vaccination Acts, who oppose, tooth and nail, the Contagious Diseases Act (Human), and who have a certain class-hatred of the patrician personages for whose perverted lust the daughters of the poor were procured by hook or crook. Here he found supporters and willing subscribers to the defence-fund. He had done a good work in exposing the social monstrosity, and "the end excused the means," they loudly asserted. During this interval such of those individuals exposed in the investigation as could leave England got away. The Minotaur has fled over sea. The two young ladies who constituted themselves a firm of procuresses "have left their country for their country's good." And it is asserted that there are a good many persons very anxious to get away before the arrival of the day of wrath. In the event of the defendants coming to grief, there is no doubt that in revenge the persons who have figured in the original investigation will be exposed. It is a case of the farther in the deeper; and we may expect some most startling disclosures to follow the conviction of the defendants.

One disclosure has been already made which has not redounded to the credit of the medical profession. For some reason or other which forensic skill has not satisfactorily cleared up, after being examined by the midwife the child was again examined by a physician,—not a poor, broken-down devil who is reduced to any makeshift to rub along, but a genuine Harley Street swell, who is closely linked with the Salvation Army,—who did not decline to accept three guineas as his fee for the examination under chloroform. This revelation decidedly gave a shock to the profession of a distinctly galvanic character, but so far no steps have been taken either to justify and defend him or to take him to task by the College of Physicians or by the leading journals. He may be congratulated on the fact that he does not stand in the dock with the defendants; for to examine a child under chloroform is surely a legal offence, in the absence of consent given by its parents and natural guardians. And there the thing stands: every one besmirched who is connected with the inquiry. One cannot touch pitch without being defiled. And how the investigation will branch out in different directions, as further legal action is taken, it is impossible to say. But the whole thing will probably be laid bare, and a huge social cancer demonstrated to exist in our midst. One seems to stand on the brink of a horrible disclosure, of which this disgusting trial is but the opening scene. Of course those persons in good social position who see disgrace and ruin staring them in the face are moving heaven and earth to close inquiry. Equally the supporters of the defendants (who regard them as martyrs) are girding up their loins for the fray. Class-jealousies are fanning the passions on both sides, and the battle will be fought out to the bitter end. No one palliates the lust which brought the whole thing about; but, then, were its magnitude and extent such as to justify these terrible disclosures, this national pollution? To steep the entire community in impurity in order to expose a certain number of persons who are a disgrace to a civilized country, is with many persons a step of doubtful desirability. However that may be, the first scene will soon close; and as to the future, we must take it when it comes.

In another recent trial a question of medical jurisprudence cropped up in the form of "disputed identity." A young lady at Brighton, a Miss Dash, was walking out with her mother, when a stranger introduced himself to her, explaining that he had met her at a ball, and giving his name as Captain Macdonald. This was a rather unusual commencement of a courtship, which, however, rapidly ripened just the same, and in a remarkably short time (to be measured by hours rather than days) the pair were married. After an equally brief honeymoon, Captain Macdonald took his final departure, leaving his recent bride disconsolate. At last her search for her errant lord resulted in the discovery that the man who took her to the altar was a married man, connected with the meat-market. She at once identified him as her husband. Troops of her friends swore positively to him, while, on the other hand, troops of his friends were equally positive that it was impossible that the said John Malcolm could have played the part of Captain Macdonald. The trial ended in the jury being unable to agree as to their

verdict, and the case had to be tried over again. In the mean time, all the facts were carefully gone over, and several who had been strong supporters of John Malcolm's innocence fell away from him, and at the second trial the gay Lothario was convicted and sentenced to penal servitude for committing bigamy.

One incident of immense real value was described, of which, however, forensic skill did not avail itself. Repeated action becomes automatic and independent of the will, and this fact has been made use of by writers of fiction. Fenimore Cooper utilizes it in "The Pirate." When "long Tom Coffin" and his marine comrade were being examined by a British officer, the latter suddenly uttered a common military command in a loud voice. Instinctively by the force of habit the marine obeyed the word of command, and so betrayed himself, while the sailor remained still and unmoved: there was no force of habit leading to unconscious betrayal operating in his case. Now, such unconscious betrayal was manifested by John Malcolm when identified by Miss Emma Dash as Captain Macdonald. When in the presence of witnesses Miss Dash saw before her the man whom she believed to be her lawful husband, and also then knowing that he was the husband of another woman, she was emotionally perturbed, as was quite natural under the peculiar circumstances of the case. What does the whilom husband do? He does not regard the lady as a stranger bringing a grave charge against him, and coolly regard her emotion unmoved himself, as he certainly would have done had she been really unknown to him. He went up to her and put his arm around her to soothe and console her. No man would do this to a perfect stranger, and in the presence of others, too. The act at once betrayed previous familiarity, to my mind. The man who puts his arm around a woman under these circumstances is no stranger, but some one who has been on terms of great familiarity some time in the past. If John Malcolm had, as Captain Macdonald, married Emma Dash, and been as a husband unto her, then his action becomes intelligible enough: it was but the repetition of an act frequently repeated in the past. Such act of unconscious betrayal has a high psychological interest attaching to it, and a value of its own,—albeit it did escape the acumen of the British bar.

J. Milner Fothergill.

BALTIMORE.

Baltimore, November 20, 1885.

ANOTHER murderer has just been acquitted in this State, in whose trial the plea of "emotional insanity" was successfully made. A man named Hance, living in the southern part of Maryland, was married in this city a year or two ago to a woman who had been an inmate of a house of ill-fame. The married life of the couple does not seem to have been a very happy one, and after a time the woman returned to her former mode of life. Hance, on his visits to the city, would visit the woman at her new abode. The testimony proved that frequent quarrels took place between the two at these visits, and one day, after one of these disagreements, Hance shot his wife through the head.

At the trial, which took place in Annapolis, Senator Voorhees was one of the counsel for the defence. The killing was admitted, but, from the testimony of the neighbors and kinsmen of the accused, a case of emotional insanity was made out by the learned counsel. It is questionable, however, whether this would have had any weight with the jury had not the eloquent arguments of the attorneys and the family influence of the accused (which is very great) profoundly impressed the twelve good men and true. At all events, the prisoner was acquitted, "amidst tremendous applause," as the papers stated. It is significant, however, that the finding was simply "not guilty,"—in other words, an absolute acquittal,—and no reference was made in the verdict to insanity. This specious plea was simply introduced as a cover to secure an acquittal without making the whole trial a travesty of justice. There was no evidence whatever that the accused had, either before or after the murder, given any indication of mental disease, except the fact of his having married a prostitute whose charms had fascinated him. It is a satisfaction to know, however, that the verdict of the jury cannot be quoted as a precedent in future cases of this sort, since it completely ignored not only the facts presented by the commonwealth, but also the plea of the defence.

The new hospital for the Marine Hospital Service is nearing completion, and will be ready for use during next year. The wards are one-story pavilions. There are separate buildings for the administration, kitchen, surgeon's residence, etc. The hospital is beautifully located about half a mile north of the city, and commands a fine view of Druid Hill Park.

G. H. R.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Stated Meeting, November 5, 1885.

The President, B. F. Baer, M.D., in the chair.

(Continued from page 178.)

OÖPHORECTOMY FOR OVARALGIA.

DR. WILLIAM GOODELL exhibited the ovaries from two cases of oöphorectomy, with the following histories.

When the patient, an unmarried woman,

aged 30, first consulted him, she weighed two hundred and thirty-six pounds; but at the same time she was very weak and could barely walk. She suffered excessive pain at her catamenial periods, which appeared only at long intervals. She had cataleptic and hystero-epileptic fits, and complained of very constant and acute ovarian pains. Her urine was passed but once a day, and this act was attended with much suffering. The womb was enlarged and the ovaries were very tender indeed; but nothing else abnormal was discovered. Asafetida and the bromides were prescribed in large doses, and she was advised to try the rest treatment. Fourteen months later she was again brought by her physician to consult Dr. Goodell. She now weighed only one hundred and twenty pounds, having lost one hundred and sixteen pounds, and she was in every respect worse, her ovarian pains being now constant and very acute, requiring large doses of morphine to control them. Her catamenia had not appeared for nigh four months, and tonics seemed to have no effect whatever on her. Her physician was compelled to be in constant attendance on her, and was liable to be summoned at any hour of the day or night to give her a hypodermic injection. Masturbation was suspected, but she always denied practising this habit.

Nothing further could be done than the operation of oöphorectomy, which was accordingly performed a few days later at the hospital of the University. The ovaries were found much enlarged from cystic and interstitial degeneration, but there were no evidences of peritonitis or of cellulitis, which had been suspected. A corpus luteum existed in one ovary, a rectal hemorrhage or vicarious menstruation having taken place a few days before the operation. Her ovarian pains at once left her. She needed but very few doses of opium, which were given by rectal suppositories. Her convalescence was prompt, and she returned home in less than four weeks, free from all pain and in a fair way to get perfectly well. The case was a typical one of the advantages of oöphorectomy; yet he (Dr. G.) thought that the operation is now performed altogether too frequently.

OÖPHORECTOMY FOR BLEEDING FIBROID OF THE WOMB.

In this case the lady was 37 years of age, and had been married eleven years. She gave birth to a child about seven years ago, and since then had had one premature birth at seven months and one miscarriage. She first noticed an abdominal tumor nine years ago, but her catamenia began to be free some time before this. Late in the year 1881 the catamenia began to be excessive. As nothing served to check them, early in the following year Dr. Goodell was consulted. He found multiple fibroids of the womb. Six tumors could be readily made out, of which two seemed pedunculated. The sound gave a measurement of four and a half inches. Under ergot and ammonium chloride the patient improved for several months; then the menorrhagia became worse, and finally a dribbling of blood kept up between the periods. In May of the present year she again consulted Dr. Goodell. She had been dribbling continuously from January, and was much reduced in strength. Being a brunette, she exhibited the facies uterina in a most marked degree, the pigmentation being very dark and extensive. The womb now measured seven and a half inches.

She was admitted into Dr. Goodell's private hospital, and on May 24 both ovaries were without difficulty removed. They were greatly enlarged by follicular degeneration, a condition which Dr. G. had repeatedly seen in cases of fibroid tumor. The effect of the operation on the tumors, and especially on the main one, was astonishing. After two weeks this fibroid had diminished in length nearly a hand's breadth. Her recovery was prompt, and she was sent to Atlantic City to recruit.

On July 10, just forty-seven days after the operation, she called on Dr. Goodell, who found the tumors very greatly reduced in size and the uterine cavity measuring only three and a quarter inches, a diminution of four and a quarter inches. This extraordinary amount of diminution, in spite of the fact that the obliteration of the ovarian blood-vessels cut off only a small portion of the blood-supply to the womb, drove him to the conclusion that the ovaries were the important factors in inviting the blood to the womb. Every successful case in which he had removed the ovaries for fibroid tumor of the womb had been followed by the menopause and by rapid diminution in the size of the tumor. But in his hands and in those of others this operation is more fatal than that of ovariotomy. During the ten months of the present year he had had twenty-five cases of ovariotomy, with but one death, and that one in a lady operated on at her home, two hundred miles from Philadelphia. For simple cases of oöphorectomy the mortality should not be greater than that of ovariotomy. But when complicated with the presence of a large or an adherent fibroid tumor, the operation is often one of great difficulty. Twice during the past year he was unable to reach the ovaries and was compelled to abandon the operation, because in neither case was the woman willing to undergo the risk of having hysterectomy performed. Each case recovered, and while the women were under observation the tumors appreciably lessened in size, as if the shock of the exploratory incision had temporarily suspended the ovarian influence.

Dr. MONTGOMERY was glad to hear the

good results in Dr. Goodell's cases. In a few of the cases upon which he had operated the menopause did not at once occur, sometimes not for two years after the operation. In such cases the tumor did not decrease in size while menstruation continued. In the case of hysterectomy for fibroid tumors reported by Dr. Montgomery at the last meeting, the temperature at no time exceeded 101⅗°, and the patient left the hospital to-day perfectly well. He preferred removal of the uterus and its appendages entire when the ovaries cannot be removed in consequence of previous inflammatory changes. Ligation of blood-vessels supplying the tumor might be useful when nothing better could be done.

Dr. Baer thinks that when the ovaries can be removed, it is the preferable operation.

Dr. Goodell has been so uniformly successful in removing the ovaries for the cure of fibroid uterine tumors that it is his choice. He has been notified that in a case of fibroid tumor of the womb in a woman aged 33 years he will be called in consultation: this will be the third. He will advise removal of the ovaries; if at the time of operation that is not found possible, he will close the incision, as the other operation is very dangerous and the patient can certainly live a few years as she is. In only one case of his oöphorectomies had the menses continued, and he thinks that in that case there must have been some supplementary ovarian tissue.

OVARIOTOMY.

Dr. Montgomery exhibited for Dr. Warder a large ovarian tumor and related the following history. The patient was a young woman. Her menses commenced at seventeen years of age, and had always been irregular. They ceased entirely for twelve months, and at the same time the abdomen was enlarging until the tumor reached above the navel. Fluctuation was doubtful; the mass seemed quite solid and pressed the uterus down into the pelvis. Anæsthesia did not relax the abdominal wall, and diagnosis was doubtful. An exploratory incision showing the pearly tint of an ovarian tumor made it sure. Nothing would pass through the trocar, but some of the jelly-like contents of the tumor escaped beside it and passed into the abdomen. The large cyst was filled with small cysts. The patient did well for one week; then the pulse became rapid; but she has since been doing well, and is now rapidly recovering.

Dr. Goodell thought that the danger from the escape into the abdomen of cyst-contents is overrated.

Dr. Baer said that in the early stage of ovarian tumors metrorrhagia is sometimes present; sometimes the menses are entirely absent. He should like to hear from the Society some reason for this inexplicable difference.

Dr. Goodell had observed the same facts, but could throw no light upon the subject.

Dr. Montgomery remarked that in this case both ovaries had undergone cystic degeneration. The second ovary contained numerous small cysts.

Dr. Baer inquired about the treatment of the second ovary.

Dr. Montgomery replied that it was removed.

SOME USES OF COCAINE IN GYNÆCOLOGY.

BY CHARLES HERMON THOMAS, M.D.

Seldom does a new drug reach so sure a place in the confidence of the medical profession as that accorded to cocaine. I early began its employment in ophthalmic practice, and soon extended its use among other things to a variety of gynæcological applications. The results obtained have been so satisfactory that I now never go to such a case without cocaine in my bag or pocket. After considerable experience in its use, I am convinced that it is quite as valuable in the latter class as in the conditions for which it was originally recommended. That it is a local anæsthetic, when applied to mucous surfaces especially, is a familiar fact; but its property of rapidly reducing engorgement and swelling of the same class of tissues is not so generally recognized, notwithstanding this is a point of considerable practical importance. This action of the drug is readily verified by observing the marked paleness and shrinkage which follow in a few moments after its application to surfaces thus affected. While this condensation of tissue is to a considerable degree temporary, it seems to be of longer duration than the accompanying anæsthesia. In some cases the good results obtained by reducing hyperæmia in this manner appear to be permanent. The common fear that it will fail to prevent pain may usually be overcome by placing a few drops of the solution on the tip of the patient's tongue, when the numbness produced is quite sure to induce full confidence in its efficacy. Cocaine hydrochlorate is the salt upon which my experience is based.* A four-per-cent. solution (gr. iiss to ƒ3j) in water acts well for most purposes, though a somewhat weaker or stronger one may sometimes be substituted with advantage. The addition of boric acid in the proportion of gr. ij to the ƒ3j insures stability of the solution, while a little glycerin prevents too rapid drying.

When used, it should be applied with thoroughness, the parts being first freed from mucus, and some minutes allowed to elapse for its effects to develop; the time should be *not less than two minutes*, and, in cases where considerable pain is to be anticipated, a strong solution (ten per cent. or more) may be employed, and the application repeatedly made at intervals of two minutes, when in five or

* The price has been reduced to ten cents a grain or less.

at most ten minutes from the beginning the full effects of the drug may be looked for. That the anæsthesia produced by cocaine is profound I have personally experienced, having made use of a four-per-cent. solution by injection into the nostrils previous to an application at the hands of Dr. Harrison Allen of the galvano-cautery to the nasal cavity. The cautery had been applied on a previous occasion without the full effect of cocaine being produced, and the pain was severe. With it not the slightest pain was felt, and I was conscious of the action of the cautery only by the hissing sound produced.

I have found it particularly valuable in certain cases of cervical endometritis, in which, though there may be no erosion externally, and but little characteristic discharge, there is a state of extreme hyperæsthesia existing about the region of the internal os uteri,—a probe or cotton easily bringing blood, and any application made to the part is liable to produce bleeding and severe radiating and ovarian pain. Cocaine carefully applied with the syringe or the cotton-carrier prevents the pain and bleeding which would otherwise follow the necessary medicinal application. The swelling is also materially reduced, and the congestive or inflammatory stenosis which usually exists is consequently for the time relieved, so that applications to the part itself, as well as to the entire endometrium, are greatly facilitated. In urethral caruncle sensibility may be so destroyed by cocaine that the painful excrescences can be clipped off and the site painlessly cauterized. Cocaine is also extremely useful in painful irritation and inflammation of the female urethral tract, and especially of the part just within the meatus, a condition attended with distress frequently referred to the bladder. Appropriate medication is painlessly made after its application, which may be conveniently done by means of the glass medicine-dropper. As a means of preparation for the operation of stretching either the urethra or the cervix uteri it is of unquestionable value. To precede the application of caustic to chancre it is also effective. I am informed by my friend Dr. Levis, who has had a large surgical experience with the drug, that in plastic operations upon the vagina, where considerable surfaces are to be flayed, the cocaine-anæsthesia is insufficient to prevent pain. It has been recommended in dysmenorrhœa, and there is good reason to believe from several reports which have been made that it is capable of producing excellent results when applied to the os uteri and to the cervical cavity by means of a small cotton tampon. I tested it recently in a case of uterine colic, using it hypodermically in two doses of one grain each about half an hour apart, but without appreciable relief. Some general nervousness was complained of, but otherwise there were no uncomfortable results. It has been tried internally in doses of one grain or more in the vomiting of pregnancy, and has met with some favor, but in the only case within my own knowledge it entirely failed.

In a case of painful vaginismus, with dyspareunia, brought me by a practitioner from a neighboring city, the condition was quickly relieved by the local application of cocaine, and a complete examination was easily made, where without its use general anæsthesia would have been necessary. In a case of hyperæsthesia of the vagina with mild vaginismus, in which frequent local treatment was required, a suppository containing one grain of cocaine introduced into the vagina a half-hour before each treatment entirely abolished the spasm, and rendered the introduction of the speculum easy and comparatively painless. Cocaine suppositories also produced excellent results in a case of rectal tenesmus in which opium had proved inefficient.

Cocaine has been recommended in operations for lacerated cervix and in lithotrity. I have not made use of it in either of these applications, but strongly believe in its value.

In one hyperæsthetic patient in whom violent pain was developed on slight provocation, and who required local treatment of the cervix uteri and urethra, but who suffered so much from ordinary applications that the local benefit was fully counterbalanced by harm done nervously, it became necessary to suspend treatment on this account. After cessation for six months, treatment was resumed under cocaine, and it has since been in every way satisfactory, the pain formerly produced by applications to the cervix being entirely absent. In the same patient painful irritability, with spasm of the bladder simulating cystitis, which was not entirely relieved by the opium suppository and other measures, yielded completely and thus far permanently to a single injection of one grain of cocaine thrown into the bladder. The resumption of treatment in this instance was largely due to the enthusiastic approval of the husband, who had himself experienced complete relief from the injection of a drachm of the two-per-cent. solution into the deep urethra for a violent urethrismus. In another instance, a woman with irritable piles, who was suffering extreme discomfort, the piles shrank and turned pale under the cocaine application, and were then painted with tincture of iodine with entire absence of pain at the time, and with much subsequent benefit.

Dr. KEATING had used cocaine for some time in the same class of cases. He now uses eight-per-cent. solutions with great success, especially in children's throats. He employs salicylate of cocaine in diphtheria in a five- or six-per-cent. solution. Sensibility disappears in a short time, and he can then use any application without discomfort. He applies carbolic acid, tincture of iodine, etc., in this manner without exciting pain. He also applies cocaine before injecting carbolic

acid into piles, and also applies it on cotton to prevent its action ceasing too soon.

Dr. THOMAS said that the strength of the solution may, with propriety, be greatly varied, and that in his practice in ophthalmic cases a one-per-cent. solution had been found strong enough to be of considerable value in conditions of irritation such as that produced by foreign bodies in the eye; but in other cases, as urethral caruncle, it might be well to use it even in saturated solution. The question of strength is largely a question of expense, for in local application made under the observation of the physician no toxic results are likely to be produced.

W. H. H. GITHENS, M.D.,
Secretary.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

MEETING OF NOVEMBER 12, 1885.

The President, J. C. WILSON, M.D., in the chair.

DR. FUSSELL presented specimens from a case of

MASTOID DISEASE.

Male, æt. 25 years. Never had scarlet fever. Since vaccination at the age of five years had had occasional attacks of suppuration of the middle ear. General health was good. Was first seen by Dr. Fussell July 14. For several weeks he had had earache, with one slight chill. When seen, hearing was very poor, tympanic membranes opaque, swelling and redness of the left mastoid process, and temperature elevated. His general condition grew worse, and an incision was made over the mastoid process, but it failed to find pus. On extending this incision a few days afterwards, pus flowed freely, and he was much relieved. He afterwards grew worse, fell into a typhoid condition, and died July 24. Before death, blood oozed freely from the cutaneous surface. At the autopsy the mastoid cells were found filled with pus. In the inner half of the process was a large, irregular cavity filled with a pultaceous mass of necrosed bone: this communicated with the middle ear. The walls of the lateral sinus were thickened, easily detached from the bone, and the seat of a purulent inflammation. The sinus contained no thrombus. The meninges over this part were discolored, though not inflamed; but there was a patch of inflammation over the anterior edge of the left lobe of the cerebellum. Brain-substance was normal. Remaining organs were not remarkable, except the right lung, which contained in its apex two small abscesses. From the condition of the sinus, the reporter thought there had been an actual admixture of pus with the blood.

Dr. PACKARD presented an

ANOMALOUS LUNG.

It was taken from the body of a negro who died of Bright's disease. From the inferior surface of the lower lobe of the right lung springs a tongue-shaped process of pigmented, crepitant lung-tissue, two and a half inches long and two inches wide at the base, resting upon the diaphragm, its upper surface being in apposition with the under surface of the lower lobe. Dr. Packard had recently seen in the body of another negro a similar anomaly, except that the process was smaller and situated more anteriorly.

Dr. MUSSER presented a

CYSTIC KIDNEY.

It was the right kidney, and was taken from the body of a man, æt. 72 years, who died of apoplexy. The kidney was cirrhotic and contained two cysts, the larger occupying the upper one-fourth of the organ. Its walls were firm, and it contained clear fluid, in which floated cheesy masses, which the reporter thought were degenerated pus. When first seen, the patient was passing small quantities of bloody, highly albuminous urine, and complained of pain in the right renal region. These symptoms were apparently due to an acute process grafted upon the chronic lesion. The blood and most of the albumen disappeared, but the pain persisted. Was this pain due to the cyst?

Also, a

CARCINOMA MAMMÆ,

removed from the body of a woman æt. 75 years. The breast had been injured eight years ago, and three years afterwards the tumor was noticed. There was never any pain in the tumor. The lymphatic glands of the axilla were involved. In addition, there was a large lipoma of the back of the arm. She had frequent attacks of pain in the tibiæ and left parietal bone, apparently due to periostitis, and not to any secondary growth. There was no syphilitic history.

Also, specimens from a case of

DIABETES MELLITUS.

Female, æt. 43 years; had a vesico-vaginal fistula fourteen years. Diabetes had existed without apparent cause two months. Patient was unusually fat, and had lost no weight. She died of coma. Temperature in the abdominal cavity three hours after death was 107.8° F. Liver large and fatty; gall-bladder contained thirty stones; kidneys fatty; pancreas normal. Blood had a most marked lactescent appearance, and after standing twelve hours globules of fat collected on its surface. Lacteals in the mesentery engorged with chyle. Microscopic examination of lungs showed no fat-emboli. In the urinary bladder was a large phosphatic calculus.

Dr. OSLER thought the peculiar condition of the blood was what we should find nor-

mally in a person dying during digestion, and called attention to the fact that very frequently in diabetics there is engorgement of the lacteals.

Also, a

FŒTUS PAPYRACEUS.

The mother was delivered in the morning of a mature, living child, and in the evening of this fœtus. It is apparently of the fifth month of pregnancy, and, with the exception of shrivelling and paling of the skin, is quite normal. The cord is thin and soft, its length unknown. The placenta is thin, flat, compact, and whitish yellow, apparently having undergone complete fatty degeneration.

Dr. J. B. ROBERTS presented a small tumor, the size of a hickory-nut, which he had removed from the back of the wrist of a young man. It had the clinical appearance of an ordinary ganglion, but attempted evacuation showed it to be solid. It was then enucleated and found to have been developed within the theca of the tendon going to the middle finger, and probably between its fibres. The great rarity of solid tumors in this locality was mentioned.

Dr. OSLER asked if the patient had a rheumatic history, although this specimen was rather large for a subcutaneous nodule occurring in rheumatism.

Dr. ROBERTS knew nothing of the history.

Dr. NANCREDE presented fluid from an encysted hydrocele. The fluid contained large numbers of dead spermatozoids.

Dr. HUGHES presented a

PRIMARY CARCINOMA OF THE LIVER.

Female, æt. 58 years. A daughter died of cancer of the uterus. She had been in good health till eighteen months ago, when flesh and strength began to fail. With this there were occasional attacks, lasting about a week, of headache and sick stomach, followed by diarrhœa. There was pretty constant lancinating pain in the hepatic region. Five months ago she had an attack of jaundice (her only attack) lasting two weeks, and at this time a tumor was detected in the liver. At the autopsy the liver was found much enlarged, and scattered through its substance were firm cancerous nodules, varying in size from an orange to a pin-head. In addition to these there were several cysts, one in the left lobe two inches in diameter, filled with clear fluid. The liver-substance between the cancerous nodules was normal. The gall-bladder was full of healthy bile, and the ducts patulous. There were no enlarged glands in the fissure of the liver, but the retro-peritoneal and mediastinal glands were increased somewhat in size and the seats of secondary deposits. With these exceptions, there was no growth outside the liver. The intestines were crowded into the left side of the abdomen by the enlarged liver. The stomach was very small, only one inch in diameter at its fundus. There was an intussusception three inches in length at the ileo-cæcal valve, which, on being reduced (which was effected with some difficulty), showed the apposed surfaces of peritoneum covered with lymph.

Dr. FORMAD presented specimens and read a paper on

AN ANALYSIS OF TWO HUNDRED AND FIFTY AUTOPSIES ON DRUNKARDS, ILLUSTRATING THE MOST PROMINENT ANATOMICAL LESIONS OF CHRONIC ALCOHOLISM.

He considered the most conspicuous lesions to be cyanotic induration of the kidneys, fatty infiltration of the liver, and mammillated stomach. His cases had been those in which there had been a history of a long-continued series of debauches, the subjects often dying in one of these debauches, and did not include moderate drinkers or those who perished after imbibition of an enormous quantity of alcohol without any previous chronic excesses. He thought that the exposure, irregularities of diet, etc., incident to a state of drunkenness had much—probably more than the alcohol itself—to do with the production of the lesions; but it was not at all possible to separate one from the other. He gave a long list of lesions considered by various authors to be results of chronic alcoholism, among which the cirrhotic liver with contraction held a prominent place. He had himself at one time considered cirrhosis a very frequent, if not almost necessary, concomitant of long-continued, excessive use of alcohol, and had even testified in court that a certain person was not likely to have been a hard drinker, because at the autopsy no cirrhosis of the liver was found. He had thought, too, that the connection between the two was so close that it was impossible to have a case of cirrhosis without a previous history of alcoholism, as is held by various authors. Therefore it was surprising to him to meet in his two hundred and fifty autopsies with only six cases of cirrhosis of the liver with contraction. In two hundred and twenty cases the liver was considerably or even very much enlarged, the enlargement in most cases proving to be due to a fatty infiltration. Cyanotic induration of the kidney and chronic gastritis, with mammillation of the stomach, were found in nearly every case. This cyanotic induration is peculiar, and differs from the cyanotic induration due to heart-disease. At a future meeting he will give a detailed account of the above lesions and a more extensive analysis of the cases.

Dr. TYSON could not speak from a systematic observation of a large number of autopsies in the cases of confirmed drinkers, but he remembered distinctly being surprised in several cases by the absence of cirrhosis where he confidently expected to find it.

Dr. WILSON said that Anstie, in the article

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on alcoholism in Reynolds's "System of Medicine," had called attention to the comparative infrequency of contracted liver in confirmed drinkers. This observer, in an extensive out-patient practice in London, had seen large numbers of cases of alcoholism, but very few among them presented the physical signs of cirrhotic (contracted) liver. The experience of the staff at Blockley Hospital sustains this view. There many of the patients are soaked with alcohol; but even among those whose death is directly or indirectly due to alcoholic excess, fatty liver is much more common than contracted liver.

Dr. OSLER thought the experience of pathologists and morbid anatomists with histories of patients is not of the most satisfactory character, he often having had cases to dissect where he knew very little of the history. Before saying these cases were chronic alcoholics, Dr. Formad should present more specific statements about them. His own experience with livers in a large number of autopsies on cases of chronic alcoholism had led him to divide them into four classes: 1. Those in which the condition of the liver is pretty satisfactory: some of these cases may take alcohol for many years and yet the liver pass muster. 2. Fatty cirrhotic livers; the cirrhosis may not, perhaps, be distinct to the naked eye, but plainly shown by the microscope: this is the largest class. 3. Hob-nail livers: these he would say were much more common than in Dr. Formad's series. 4. Hypertrophic cirrhotic livers. The difference between his observations and those of Dr. Formad might possibly be accounted for by a difference in the form of alcoholic beverage taken. He had not observed the special form of kidney described by Dr. Formad. In reply to a question, he said, in order of frequency, he would place them: fatty cirrhotic, hob-nail, hypertrophic cirrhotic, apparently normal.

Dr. S. SOLIS COHEN said there were certain theoretical considerations which suggested themselves in this connection. The text-books teach that the lesions of alcohol are of two kinds, sclerosis and steatosis. It is known that in some organs the fibrous change precedes the fatty one. The latter is the higher grade of degeneration. The subjects of Dr. Formad's autopsies were confirmed whiskey-soakers, in whom one would expect to find more intensity of degeneration than in those whose use of alcohol, though persistent and excessive, was not so outrageous. Another point, which had not been alluded to, was the fact that some lesions might result from a local action of the poison upon the tissues, while others might be due to its systemic action. No study of the subject could be complete in which these points were overlooked.

Dr. RANDALL suggested that the point touched upon by Dr. Osler—the character of alcoholic beverage—might be very important. In Vienna, among beer-drinkers, he had found the fatty liver much more common than the cirrhotic; while in England, where much gin is drunk, and he should suppose in Scandinavian countries, where they drink altogether strong spirits, the cirrhotic liver is doubtless comparatively frequent.

Dr. MUSSER had recently had to go over the records of the Pathological Society, especially in liver-diseases, and had found the total experience of different observers the same as Dr. Formad's, and also in those cases cirrhosis was caused not so much by heavy drinking as by persistent drinking of spirits on an empty stomach.

Dr. FORMAD presented the

SAC OF AN EXTRA-UTERINE PREGNANCY.

The woman from whom this was removed had not suspected that she was pregnant. She was in perfect health till twelve hours before death, when she was suddenly seized with excruciating pain in the left groin, rapidly followed by collapse. On opening the abdomen, it was found to contain at least a gallon of partly-clotted blood. About the middle of the left Fallopian tube was the sac, with a rent in its posterior wall. This sac was one inch in diameter, and contained clotted blood and placental tissue. The uterus was twice its normal size. The fœtus was not found.

Also, an

ANEURISM OF THE ASCENDING AORTA, RUPTURING INTO THE PERICARDIUM.

The patient was a laboring-man, and had considered himself in perfect health. He died very suddenly. The aneurism, one-half inch in diameter, was situated just above the posterior aortic leaflet, and had broken through the wall of the aorta at the point where it touches the descending cava. The cavity of the pericardium was fully distended with clotted blood.

W. E. HUGHES, M.D.,
Recorder.

THE NEW YORK STATE MEDICAL ASSOCIATION.

A MEETING of the Association was held in New York November 17, 18, 19, and 20, 1885.

The President, Dr. John P. Gray, of Utica, occupied the chair at most of the sessions. The total number registered amounted to about two hundred and twenty; the total membership throughout the State is about five hundred and fifteen. The attendance at the different sessions was usually good. The President for the next year is Dr. E. M. Moore, of Rochester.

Dr. Gray, in his address on "The Relations of the State to Medical Science," pointed out

those relations as they exist in New York State at the present time, and, remarking upon proposed changes, he expressed his views in opposition to a State Board of Medical Examiners or of separating the power to grant diplomas and license to practise from the medical teaching bodies. Our medical colleges had had a great deal to contend with in their efforts to elevate medical education, but their efforts had to a considerable degree been crowned with success; and they would probably succeed, as the need of it became more and more apparent, in raising the standard of preliminary medical education.

The reports of the Presidents of the several Branch Associations and of the New York County Medical Association showed that there had been a good deal of scientific work done throughout the State during the year.

Dr. Alfred L. Carroll, in an address on "State Medicine," pointed out the need of more thorough instruction in sanitation (as the term was used in its restricted sense) than at present generally existed among physicians. The greatest ignorance of sanitary matters, and also of orthography, was shown to exist among a large number of applicants for positions on local boards of health. The requirements in England of one about to enter upon the study of medicine and of those about to go out into active practice might seem to be pretty severe and extensive, but they were no more than should be exacted of every man who had the health of his fellow-beings placed in his care. The trouble with the colleges here was not that they failed to give opportunity for a good medical education, but that they did not compel every student to avail himself of that opportunity to the greatest extent.

Dr. Didama, in a paper on "Tubercular Consumption; is it ever Inherited?" expressed his belief in the germ-theory of the disease, and said he did not think it was ever inherited. It had never been found to exist in the body of a fœtus, and the statistics of life-insurance companies showed the great numbers of those suffering from the affection whose parents had been free from tuberculosis. He believed that the families of those having tubercular consumption were more likely to acquire it than others, because of exposure to infection and an inherited feeble constitution.

Dr. Rochester, in discussing the paper, related two cases which were opposed to the view that the disease was not hereditary. A child died three weeks old with the symptoms of consumption, and at the autopsy one lung was full of miliary tubercles and the other contained a cavity the size of a hickory-nut. The father had died of consumption prior to the birth of the child; the mother was a healthy woman. In a second case the child suffered from all the symptoms of consumption for some time, and died aged eighteen months. The father had died with consumption before the birth of the child; the mother was healthy.

Dr. Simeon Tucker Clark read an instructive paper on "Psoitis and Peripsoitis; their Pathology and Differential Diagnosis." The paucity of the literature on this subject was shown. The author narrated three cases which had come under his observation, in which psoitis had followed an injury,—in one of the cases the injury having occurred during roller-skating, and in another while throwing grain-bags upon a wagon. The patient felt pain in the region of the psoas muscle, extending down the leg, the motion of the limb being painful. A boggy tumor then appeared in the hypogastrium. This tumor was at first composed of serous exudates, which if allowed to remain would undergo pustular change, invade the neighboring tissues, the periosteum, and bone. The object of the treatment was to prevent this train of symptoms. The tumor on being recognized should be emptied of its contents, the wound being treated antiseptically in the usual manner. In one of the cases reported the patient died, and the extension of the disease from the soft parts (where it had evidently started) to the periosteum and bone was demonstrated. In another case the discharge took place spontaneously into the bladder, but later an external opening was made and the patient made a good recovery.

Dr. Frederick Hyde, in discussing this paper, considered it as one of very great importance, for many of these cases doubtless went on unrecognized, and led to a condition of things called Pott's disease, etc. He had seen some cases of the kind described by the author, and the treatment which had been suggested was of the utmost importance to prevent the decomposition of the pus, the destruction of the periosteum and bone, and the development of sepsis.

The short communications on the subject of "Shock, and the Effects of Injuries on the Nervous System," by Drs. Charles W. Brown, Frank H. Hamilton, and E. S. F. Arnold, brought out some interesting points, more particularly perhaps regarding insidious shock as seen by Dr. Brown, and Dr. Hamilton's opinion concerning railroad shock, and Dr. Arnold's concerning the part played by the sympathetic system in the production of shock. Dr. Hamilton said that if there was a peculiar form of shock which deserved the name of railroad shock, it was that in which the peculiar motions (like cracking a whip) during an accident while sitting in a railroad-car caused a strain or injury to the spinal ligaments and parts which sustained the vertebral column rather than to the spinal cord itself, the immediate symptoms not being of a grave character, but assuming a type which indicated secondary implication of the spinal cord. Dr. Arnold thought the symptoms in shock indicated a cessation of nutrition of

vital organs, which in health was controlled by the sympathetic system. It was analogous in character, but less in degree, to the condition produced by lightning and hydrocyanic acid. It was true, some claimed that death from hydrocyanic acid was due to cessation of heart-action, but this might be due to the action of the drug upon the sympathetic system, destroying its life, and with it the vitality of all the organs over which it presided.

Dr. Carlos F. McDonald reported an interesting case of "Gunshot-Injury of the Head followed by Insanity, Cerebral Cyst, Operation, Recovery." The injury was situated over the right first frontal gyrus, corresponding to the junction of the anterior and middle thirds, three-eighths of an inch to the right of the median line. A physician had extracted the pistol-ball, and the opening in the skull became covered with fibrous material. The patient manifested symptoms of insanity for some time after the accident, and the brain beneath the wound was penetrated by the hypodermic needle in four places, the last time nearly clear serum being found and about two drachms removed. When the patient came from under the influence of the ether he expressed great pleasure at relief from pain, which he had long suffered over the wound. He was rational, and gave a complete history of his case, except for a period when unconscious. None of his old symptoms had returned. The great rarity of cerebral cyst was mentioned.

Dr. Ely Van de Warker read a paper on "The Medico-Legal Bearing of Pelvic Injuries in Women," in which it appeared that suits based on supposed injuries to the pelvic organs in women from falls, etc., sustained from bad sidewalks, railroad injuries, and the like, were becoming quite numerous, and they were almost invariably without foundation; yet the difficulty of obtaining a thorough examination of the patient, to show that her symptoms depended upon prior conditions independent of the accident, and the fact that the defendant in the suit was usually a supposed wealthy corporation, without feeling, led the jury very unjustly to render a verdict in favor of the complainant.

The following is a leaf taken from the programme, and constituted the work of the night session of the 17th of November, the discussion being completed the next morning:

"DISCUSSION ON PNEUMONIA.

"This discussion was opened by Austin Flint, M.D., with a paper in which he propounds eight questions relative to the nature, pathology, prognosis, and treatment of acute lobar pneumonia.

"QUESTION 1. Is acute lobar pneumonia a primary local inflammatory disease, or is it an essential fever, the pulmonary affection being secondary thereto and constituting its anatomical characteristic?

"QUESTION 2. What facts and rational grounds, with our present knowledge, can be cited in support of the doctrine that acute lobar pneumonia depends on the presence of a specific micro-organism?

"QUESTION 3. What conditions or circumstances incident to acute lobar pneumonia tend to render the disease fatal?

"QUESTION 4. Are there known remedies or therapeutic measures capable of arresting this disease, or of exerting a curative influence by either shortening its duration or conducing in any way to a favorable termination?

"QUESTION 5. Is blood-letting ever indicated in this disease, and, if so, what are the circumstances indicating and contra-indicating this measure of treatment?

"QUESTION 6. Is alcohol useful in the treatment of cases of acute lobar pneumonia, and, if so, what are the indications for its use, and how is its use to be regulated as regards the quantity given, etc.?

"QUESTION 7. To what extent is it safe and useful to employ antipyretic measures of treatment in cases of acute lobar pneumonia, inclusive of the cold bath, sponging the body, or the wet sheet?

"QUESTION 8. Do relapses of acute lobar pneumonia ever occur during or shortly after convalescence, and does this disease involve any special liability to other diseases or sequels?"

While Dr. Flint's views on the subjects for discussion were already pretty well known to the profession, the matter contained in his paper was well arranged and clearly stated, and the contribution will constitute one of the ornaments of the forthcoming volume of Transactions. The author gave his reasons for believing that acute lobar pneumonia is an essential fever. He also believes the disease is due to a specific micro-organism. The value of some remedies was pointed out, more especially of quinine, of alcohol, of blood-letting, and of the wet sheet,—all under suitable circumstances or circumstances indicating their use, for it was to be remembered that acute lobar pneumonia tended naturally to recovery. Dr. Flint never knew a relapse to occur in acute lobar pneumonia during or shortly after convalescence.

In most respects, the gentlemen who discussed the questions expressed views in harmony with those of Dr. Flint.

Dr. Austin Flint, Jr., read an address on "Some of the Relations of Physiology to the Practice of Medicine," and Dr. E. G. Janeway, one on "Pathology." They were interesting reminders of the past and present advancements in medicine, and of the interdependence of the several branches of medicine.

Among other interesting papers was one by Dr. Isaac E. Taylor on "Recto-Labial or Vulvar Fistulæ," in which he advocated treatment

by ligature; one by Dr. Frederick Hyde on "The Difference in the Symptoms of Strangulated Oblique Inguinal Hernia;" "Recurring Luxations," by Dr. E. M. Moore; "A Case of Gall-Stones, Patent and Concealed; Exploratory Laparotomy, with Autopsy Ten Weeks Later," by Dr. W. W. Seymour; "The Action of Micro-Organisms upon Surgical Wounds," by Dr. F. S. Dennis; "Causes of Failure in the Treatment of Urethral Stricture by Electrolysis," by Dr. Robert Newman.

Altogether there were fifty-three papers for presentation before the Society. Many of them were not read, and a few of those which were read had the fault of trying to be complete treatises on the subjects with which they dealt. To write an exhaustive paper or treatise on any given subject is doubtless a more difficult task than to relate a case which may have a bearing on some of the points connected with that subject, yet one who chose the easier task would be listened to with greater interest by a body of scientific men than he who wearied patience by repeating that which is to be found in the medical text-books.

Whether or not the Society acted wisely in deciding not to allow any of the papers to be published in the medical journals until they shall have been printed in the volume of Transactions can better be determined after two or three years' trial, but usually proceedings which are published only in a volume of Transactions are buried to general view, and thus injustice is done to those who have spent much labor and time in preparing them.

R. C. S.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held November 25, 1885, the President, JOHN A. WYETH, M.D., in the chair.

TOXIC EFFECTS OF COCAINE.

Dr. H. J. BOLDT said that some time ago, having encountered serious symptoms apparently from the use of cocaine, he determined to experiment with the drug upon animals. In the presence of Dr. Spitzka and others he injected eleven minims of a thirty-three-per-cent. solution of cocaine into a cat weighing seven and a half pounds. The first effect was upon the gait, which was somewhat leaping, with dragging of the hind extremities. Soon there followed convulsions, perhaps forty in number, and twelve minutes after the injection death took place. The respiration simulated the Cheyne-Stokes respiration. Just after death the rectal temperature was 104°.

The autopsy, which was made half an hour after the cat ceased to breathe, showed intense congestion of the vessels of the pia mater of both brain and cord. There was an extravasation of blood in the fourth ventricle, and also a small extravasation in the anterior part of the medulla, and minute extravasations throughout the brain.

The lungs were collapsed, contained no blood; the right ventricle of the heart was overdistended with blood, while the left was empty. Death had apparently taken place from paralysis of the respiratory centre. The gray substance of the cord resembled a bloody sponge.

Dr. PUTNAM JACOBI would suppose the phenomena mentioned by Dr. Boldt pointed rather to contraction of the blood-vessels from vaso-motor irritation, such as occurred during the local effects of cocaine, and it would seem that death occurred from secondary obstruction to the circulation in the right side of the heart following contraction and obstruction of the pulmonary vessels.

The PRESIDENT said that, all the capillaries throughout the body being affected, the heart became paralyzed: first, the right ventricle, because it was the weaker. He also remarked that respiratory and cardiac shock was more likely to occur from invasion of the surface in the neighborhood of the fifth nerve than in any other locality. He further directed attention to the danger of using chloroform or ether after cocaine. A distinguished surgeon had lost a patient by giving chloroform after the unsuccessful use of cocaine, and this surgeon had cited another case in which death followed the use of ether, cocaine having first been employed unsuccessfully.

Dr. CARPENTER said this Society had already expressed its opinion in most positive terms against the use of chloroform as an anæsthetic.

Dr. PRUDDEN said the lungs of a cat as compared with the human lung were very white normally, and fell back from the chest-walls on removing the sternum.

CARCINOMA OF THE UTERUS.

Dr. R. VAN SANTVOORD presented the uterus, the seat of cancer which had probably developed primarily in the cervix, affecting the body of the organ secondarily. The woman had been delivered of a child three days before death, being attended by a midwife. At the autopsy pigmentation was found in the omentum, intestines, retro-peritoneal glands, and broad ligament. The uterus was firmly fixed, the body of about twice the normal size. The cervix was entirely eaten away by the malignant process. The urethra, near its entrance into the bladder, was ulcerated. The vagina, endometrium, and uterus were infiltrated. The pelves of the kidneys were distended, and one contained considerable clear urine.

TUBERCULOSIS OF THE PHARYNX.

Dr. VAN SANTVOORD also presented a specimen illustrating tuberculosis of the pharynx

occurring in a child about two years of age, which was admitted to Randall's Island Hospital about four months before death, with a mass of enlarged glands under the angle of the jaw upon each side. There was cachexia, which increased; and two and a half months before death there was slight cough, and some râles were heard over the chest. About four days before death the house-physician thought the child had some difficulty in swallowing, and the larynx was observed to be covered with a thin grayish coating; the temperature was 102.5°. Death took place from exhaustion. At the autopsy the enlargements in the neck were found to be due to caseous change in the lymphatic glands. The pharynx presented a roughened, somewhat worm-eaten appearance, with lenticular ulcers of the mucous membrane. The same roughened appearance was observable on the uvula, which was thickened, and also on the mucous membrane lining the nasal cavities. There were two small ulcers upon the posterior surface of the larynx, and miliary tubercles were found in the lungs, upon the pleural surfaces, in the spleen, liver, and kidneys. There were several tubercular ulcers in the intestines, and the retro-peritoneal glands formed a mass, breaking down from cheesy degeneration.

Dr. Van Santvoord said Dr. Mackenzie, of London, had reported a number of cases of tubercle of the pharynx, and had expressed the opinion that the disease was less rare than was generally supposed, it probably being often mistaken for syphilitic disease.

Dr. DELAVAN said with regard to tuberculosis of the pharynx that it certainly was a rare affection, although there may have been many cases overlooked by the general practitioner or mistaken for syphilitic disease. He had seen three cases. Dysphagia in one of those cases was very great.

HOG-CHOLERA.

Dr. VAN SANTVOORD then presented the stomach and large intestine, being specimens which illustrated the lesions of hog-cholera. The stomach was the seat of gastritis, and of one ulcer, such as were found in numbers in the large intestine, and which constituted in that locality the characteristic lesion of cholera. The ulcer had a dark, dirty, sloughing centre, with elevated edges. The ileo-cæcal valve was swollen, showed irregular breaking-down ulcers, and for about ten inches above the gut was intensely hyperæmic, and the entire mucous membrane was sloughing in its superficial portion. In the descending colon were enlarged solitary follicles, with depressed, slightly ulcerated centres, which also showed distinctly upon the peritoneal surface.

He had found lesions in the brain and cord in two cases, in two there was broncho-pneumonia, and in all there was some œdema of the lungs. In one there were ecchymoses under the pericardium and endocardium; in one there was peri-hepatitis; in all there was enlargement of the mesenteric and retro-peritoneal glands; in one case there were a few small nodules in the kidney and liver.

Dr. PRUDDEN remarked that the facts regarding the bacteria of hog-cholera were not considered as positively settled by Koch and some other authorities. That which had been discovered by Pasteur was claimed by Koch to be identical with the bacteria found in septicæmia in rabbits.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

MEETING OF NOVEMBER 23, 1885.

The President, DANIEL LEWIS, M.D., in the chair.

IN their report the Comitia Minora recommended that Drs. A. S. Purdy and A. E. M. Purdy, against whom a verdict of five hundred dollars' damages was found last week in favor of Mrs. Brown, who claimed that they had incorrectly reported that she was suffering from varioloid, be asked to appeal their case, and, if necessary, that the Society appropriate five hundred dollars for legal expenses in fighting the case.

Dr. Piffard moved that the report be laid upon the table until further information could be given by the counsel regarding the case.

Dr. Agnew moved, as an amendment, that the matter be referred back to the Comitia with power to act in the premises. He thought that great injustice had been done to two honorable practitioners and to the medical profession (which was required under penalty of violating the law to report all cases of contagious and infectious diseases to the Board of Health) in making them liable to an action for damages of five hundred dollars for complying with the law. Nevertheless, he thought it unwise to act hastily in so important a matter or to discuss it in open meeting.

The motion, as amended, was carried.

THE PRESIDENT'S ADDRESS.

The President, in his address, rebuked those physicians who gave their testimonials to compounds issued by commercial houses, quack medicines, sanitary homes, Swedish movement cures, etc. In the city of New York there was a physician to every four hundred and fifty of the population, and it was not to be wondered at that young physicians found it necessary to invent a new splint, to run for coroner, to start a new life-insurance company, to get their names on a dispensary-staff, in order to find a few patients. As he had stated in a former address, the remedy lay in rendering admission to the medical ranks more difficult, which could

only be done by raising the standard of medical study, increasing the course, and by establishing a State Medical Examining Board.

THE MECHANICAL AND OPERATIVE TREATMENT OF KNOCK-KNEE AND BOW-LEG DEFORMITIES; WITH A DESCRIPTION OF NEW FORMS OF APPARATUS AND NEW OPERATIONS.

Dr. M. Josiah Roberts called attention in his paper to the fact that many persons in both the higher and lower walks of life had minor degrees of the deformities under consideration, for which they had sought treatment, but had been turned away by the surgeon with the statement that it was only a comparatively trifling matter, and that nature would probably effect a cure. In the author's opinion, no case in which the patient thought his deformity sufficient to justify him in seeking relief should be turned away without treatment. If nature could effect a cure in some instances, mechanical measures would do the work better and in a much shorter time.

He then exhibited drawings and photographs representing knock-knee and bow-legs, either simple or in combination with various other deformities. He then exhibited a form of splint which had been employed by Dr. Davis for the cure of in-knee by exerting constant outward pressure upon the condyles. Dr. Roberts's modification of the splint used by Dr. Davis consisted in substituting elastic for rigid pressure. He also exhibited a double splint with a movable joint, by which the same object was accomplished, but taking the weight of the body off the foot. Speaking of operative measures, Dr. Roberts described the action of the osteoclast and a simple but efficient apparatus which he had devised for causing fracture of the bone by mechanical pressure. The method consisted in placing the deformed bone between two boards and applying pressure at the point of greatest convexity by means of a wooden screw. In view of improved methods of operating, the use of the osteoclast was no longer justifiable. As to chisels, Dr. Roberts had secured those of the best form and quality, but had been unable in a large number of experiments to cut out a wedge-shaped piece of bone in a clean, workmanlike manner, and he defied any surgeon to do so, either on the living subject or on the bone denuded of flesh. As to the cross-cut saw, the strokes had to be short, the teeth became clogged, and the operation was very tedious and unsatisfactory.

Dr. Roberts then exhibited the working of the electro-osteotome, by which he was enabled to divide the hardest of bones, the tibia of the sheep, in three seconds. The instrument was now so far improved that it was entirely under the control of one hand, leaving the other hand free during the operation. It had an Edison electric lamp and mirror, by which a flood of light might be cast upon the part at will. With it the circular or the cross-cut saw, or a gouge, could be used.

Among the recent instruments of precision invented by Dr. Roberts was one for measuring and recording simultaneously any combination of angles which could be assumed at a given articulation in the human body, and another for determining the base of a wedge-shaped piece of bone necessary to be removed for overcoming a deformity of any degree. The exactitude with which the latter instrument did its work had been tested in many instances aside from operations on the human body.

A letter from Dr. Janes, of the Health Board, again called the attention of physicians to the fact that the Willard Parker Hospital, for the reception of cases of certain contagious diseases, was open. The fact seemed not to be generally known, or, at any rate, the number of cases received had not been great.

REVIEWS AND BOOK NOTICES.

ARCHIVES OF OPHTHALMOLOGY. Edited by Dr. H. KNAPP and Dr. C. SCHWEIGGER. Vol. XIX., Nos. 2 and 3. G. P. Putnam's Sons, New York.

These two numbers appear bound together, and are issued in the excellent style which is characteristic of this quarterly. The following list embraces the contents: 1. Myxosarcoma of the Optic Nerve, by Drs. Johnson and Prudden. 2. A Case of Acute Inflammation of the Lachrymal Gland. 3. Severe Orbital Cellulitis the Result of the Passage of Bowman's Probe in the Nasal Duct. Both of these cases are reported by Dr. John F. Fulton. 4. Evisceration of the Globe, by Dr. E. L. Holmes. In this operation the contents of the eyeball are removed, leaving the sclerotic and optic nerves behind. 5. Ophthalmometry, by Dr. Swan Burnett. This article gives the details of some experience with the Taval and Schiötz instrument. 6. Blindness following the Attempted Extraction of the Left Upper Canine Tooth, reported by Dr. Burnett. The retinal changes resemble those seen in cases of blindness from erysipelas. 7. Injury to the Eye from Lightning, by Dr. Laker. 8. Metastatic Sarcoma of the Choroid, by Pflüger. 9. Exophthalmus, by Dr. Suttler. 10. Removal of a Piece of Steel from the Eye by an Electro-Magnet, by Dr. Stevens. 11. Examination of the Refraction and the Dynamic Relations of the Lateral Muscles in Girls, by Beselin. 12. Resection of the Optic Nerve, by Prof. Schweigger. 13. The Measurement of the Degree of Anæsthesia produced by Cocaine, by Dr. Lucien Howe, of Buffalo. This is an account of some

researches made in the laboratory of Prof. Zuntz, of Berlin. Starting with the principle that irritation of a sensitive nerve increases the blood-tension, Dr. Howe cocained the eyes of rabbits, and then measured the blood-pressure while various forms of irritation were employed. 14. A Case of Morgagnian Cataract, by Nordman. 15. Partial Embolism of the Anterior Centralis Retinæ, by Professor Schnabel and Dr. Sachs. 16 Nine Cases of Employment of the Magnet for Removal of Iron Fragments. 17. A Case of Evisceration of the Eyeball followed by Orbital Cellulitis. Both of these are reported by Knapp. The usual Reports on the Progress of Ophthalmology, with Book Reviews, follow.

H.

A Guide to the Practical Examination of Urine, for the Use of Physicians and Students. By James Tyson, M.D. Fifth Edition, Revised and Corrected, with Colored Plates and Wood Engravings. Philadelphia, P. Blakiston, Son & Co., 1886. Cloth, 12mo. Pp. 249.

The several editions of this useful manual succeed one another quite rapidly, showing that it retains favor with the profession; and, with the care given to the revision, and the constant additions made by the author, there seems to be no reason why it should not eventually pass through as many editions as a modern French romance. It is especially adapted for ready reference, the processes being selected with reference to the wants of the busy practitioner, and the criticisms upon the comparative availability of different processes seem to be conscientiously made from personal experience. The recent delicate tests for albumen are described, but the author expresses his preference for the clinical method of boiling the urine in a test-tube and acidulating with a small amount of nitric acid, which is sufficiently accurate when checked by a second method, in which the nitric acid is poured in first and overlaid by the urine. It might be advisable to introduce in a future edition a section upon the detection of some medicinal or toxic additions to urine, such as alcohol, salicylic acid, carbolic acid, arsenic, lead, etc.

Practical Surgery: Including Surgical Dressings, Bandaging, Fractures, Dislocations, Ligature of Arteries, Amputations, and Excisions of Bones and Joints. By J. Ewing Mears, M.D. With Four Hundred and Ninety Illustrations. Philadelphia, P. Blakiston, Son & Co., 1885. 12mo, cloth, pp. 794. Second Edition.

This handsomely-printed text-book is appropriately and gracefully dedicated to the late Professor Gross, with whom the author was intimately associated for several years in his duties as Demonstrator of Surgery to Jefferson Medical College.

Seven divisions constitute the work before us, which is clear in its language in its direction for applying the various forms of dressings and for performing the various operations. Surgical Dressings, Bandaging, Fractures, Dislocations, Ligature of Arteries, Amputations, and Excision of Bones and Joints comprise the subjects, which are considered systematically and in detail, without apparently omitting any point of real importance. The illustrations are numerous, and are taken mainly from Gross and other standard works on surgery, and Gray's Anatomy.

Taken altogether, it is a compendious, complete, and convenient manual of practical surgery, which the student will find of real service when preparing for his examination, and to which frequent reference can be made with advantage when he is subsequently brought face to face with the exigencies of daily practice.

An Atlas of Clinical Microscopy. By Alexander Peyer, M.D. Translated and edited by Alfred C. Girard, M.D., Asst.-Surg. U.S.A. First American, from the Manuscript of the Second German Edition, with Additions. Ninety Plates, with One Hundred and Five Illustrations, Chromo-Lithographs. New York, D. Appleton & Co., 1885. Pp. 194.

The original work, "Microscopie am Krankenbette," by Peyer, was a book which grew rather than was made. It grew out of the habit which the author had formed of making drawings of microscopic preparations while he was studying, until he found himself in the possession of over four hundred microscopical drawings, representing principally investigations in urine, expectoration, intestinal contents, and blood. The plates, almost without exception, represent original drawings, and are beautifully executed, many of them in colors. The book consists of nine parts, giving the results of examinations of (1) the blood, (2) the mammary secretion, (3) the urine, (4) the sputum, (5) the intestinal contents, (6) the contents of the stomach, (7) the fluid contents of various abdominal tumors, (8) the secretions of the female sexual organs, and (9) various micro-organisms provoking disease. The work being intended as a microscopic atlas, the text has been made as brief as possible. All who are interested in clinical microscopy will be pleased with the design and execution of this work, and will feel under obligation to the author, translator, and publishers for placing so valuable a work in their hands. The plates in which are figured the various urinary inorganic deposits are especially fine, and the various forms of tube-casts, hyaline, waxy, epithelial, and mucous, are depicted with great fidelity and accuracy.

NEW BOOKS.

EPILEPSY AND OTHER CHRONIC CONVULSIVE DISEASES: THEIR CAUSES, SYMPTOMS, AND TREATMENT. By W. R. GOWERS, M.D. New York, Wm. Wood & Co. 1885.

FACTS AND MYSTERIES OF SPIRITISM: LEARNED BY A SEVEN YEARS' EXPERIENCE AND INVESTIGATION. WITH A SEQUEL. By JOSEPH HARTMAN. Philadelphia, Thomas W. Hartley & Co. 1885.

THE DISEASES OF SEDENTARY AND ADVANCED LIFE. A Work for Medical and Lay Readers. By J. MILNER FOTHERGILL, M.D. New York, D. Appleton & Co. 1885.

TRANSACTIONS OF THE TEXAS STATE MEDICAL ASSOCIATION, SEVENTEENTH ANNUAL SESSION Held at Houston, Texas, April 21, 22, 23, 1885. Austin (Texas), Printed for the Texas State Medical Association. 1885.

A REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES, EMBRACING THE ENTIRE RANGE OF SCIENTIFIC AND PRACTICAL MEDICINE AND ALLIED SCIENCE. By Various Writers. Illustrated by Chromo-Lithographs and fine Wood Engravings. Edited by ALBERT H. BUCK, M.D., New York City. Vol. I. New York, Wm. Wood & Co. 1885.

LECTURES ON THE DISEASES OF THE NOSE AND THROAT. Delivered during the Spring Session of the Jefferson Medical College. By CHARLES E. SAJOUS, M.D. Illustrated with One Hundred Chromo-Lithographs, from Oil-Paintings by the Author, and Ninety-three Engravings on Wood. Philadelphia, F. A. Davis, Attorney, Publisher. 1885.

THE PRINCIPLES AND PRACTICE OF MEDICINE. By the late CHARLES HILTON FAGGE, M.D., F.R C.P. Including a Section on Cutaneous Diseases, by P. H. PYE-SMITH, M.D; chapters on Cardiac Diseases, by SAMUEL WILKES, M.D; and Complete Indexes, by ROBERT EDMUND CARRINGTON, M.D. Vol. I. Philadelphia, P. Blakiston, Son & Co. 1886.

THE PRACTICE OF PHARMACY: A TREATISE ON THE MODES OF MAKING AND DISPENSING OFFICINAL, UNOFFICINAL, AND EXTEMPORANEOUS PREPARATIONS, WITH DESCRIPTIONS OF THEIR PROPERTIES, USES, AND DOSES Intended as a Hand-Book for Pharmacists and Physicians and a Text-Book for Students. By JOSEPH P. REMINGTON, Ph G With nearly Five Hundred Illustrations. Philadelphia and London, J. B. Lippincott Company. 1885.

TRANSACTIONS OF THE AMERICAN OTOLOGICAL SOCIETY. Eighteenth Annual Meeting, Pequot House, New London, Connecticut, July 14, 1885. Vol III. Part IV. Published by the Society. Mercury Publishing Company, Printers, New Bedford, Massachusetts. 1885.

STUDENTS' AID SERIES:

AIDS TO GYNÆCOLOGY. By A. A GUBB, L.R C.P., etc New York and London, G P. Putnam's Sons. 1885.

AIDS TO MEDICINE. Part III. (Double Part) Diseases of the Brain and its Membranes, of the Nervous System, of the Spinal Cord, and of the Ear. By C. E. ARMAND SEMPLE, B.A., etc. New York and London, G. P. Putnam's Sons. 1885.

AIDS TO SURGERY. By GEORGE BROWN, M.R.C.S., etc.

AIDS TO OBSTETRICS. (Double Part.) By SAMUEL NALL, B.A., etc. New York and London, G. P. Putnam's Sons, 1885.

NEW REMEDIES AND CLINICAL NOTES.

THE LIFE-HISTORY OF FAT-CELLS.—A study of the structure, mode of development, and retrograde metamorphosis of fat-cells, undertaken by Bobritzky, has recently given some interesting results, which are communicated to the *Centralblatt für die Medicinischen Wissenschaften*, No. 43. The investigation was conducted upon mammalia, batrachia, and crustacea, in the laboratory of Prof. Kutschin, in Charkow. His conclusions are as follows:

1. The fat-cells of rabbits, when in indifferent fluids (weak iodine or sodium chloride solutions), afford good objects for the study of the structure of these elements.

2. Fat-cells have no proper membrane, but in its place there is an external protoplasmic layer, which becomes condensed following pressure upon the sides of the drop of fat.

3. Argentic nitrate gives good results when used as an interstitial injection, but it cannot be regarded as the specific reagent for the study of the structure of the fat-cells, because other reagents used for interstitial injection afford equally good preparations.

4. Chlor-palladium, which the author had been the first to apply to the study of the structure of the fat-cells, offers proportionately the best results, and he had been led to prefer it to all other reagents, and could recommend it to other investigators.

Usually he employs a weak solution, light yellow in color (1 gm. to 600 to 800 ccm.), not only for interstitial injection, but also for staining small pieces of adipose tissue by laying them directly in the reagent, by which the fat-cells are colored yellow. By this manipulation the parts of the cell (*i.e.*, the condensed peripheral layer, the finely granular protoplasm, with one or two nuclei, and the drops of fat) clearly appear; but also the clear transparent fluid can easily be recognized, which is found between the protoplasm and the drop of fat.

5. This clear transparent solution in the fat-cells, which usually is observed in all methods of examination of adipose tissue, is, however, an artificial product, which is formed by the diffusion of the reagent solution through the limiting membrane of the cell. (This view is demonstrated in the clearest manner by a comparison of the fresh fat-cells of the rabbit with those after treatment with chlor-palladium.)

6. Every fat lobule has its proper, characteristic, and entirely-closed vascular system.

7. In adipose tissue no nerve-endings are to be found.

8. The opinion of a few investigators (Fohmann, Arnold, Klein, etc.) that the adipose tissue is to be counted with the lymph system is without foundation. This conclusion was probably attained after a study exclusively of the fatty tissue in the omentum and mesentery, where naturally there are many lymphatic vessels to be found.

9. The fatty tissue is developed from special peculiar elementary forms, but not from connective-tissue cells. This view of the development of fat-cells proceeds from observations made upon embryos in which are found some elements in which are seen fine granular protoplasm with a clearly-defined nucleus. These elements can usually be observed at

the places corresponding with the locality of the future fatty tissue. These can be confounded neither with wandering cells (which may be distinguished by their smaller size and less finely granular protoplasm) nor with Waldeyer's plasma cells (which are seldom found, do not form groups, and are rather smaller).

10. Fat-cells are not bound together by protoplasmic processes, as Fleming has described.

11. Atrophy of fat-cells is a result not only of fasting, but also of morbid processes. It indicates an anomalous (abnormal?—Tr.) condition of the animal organism.

12. The disappearance of fat in the atrophy of adipose tissue begins in the group of fat-cells lying most distant from the arteries, on account of want of nutriment sufficient to nourish all the fat-cells in the entire lobule.

Treatment of Carbuncle.—Referring to Dr. Bulkley's treatment of carbuncle by the application of extract of ergot, oxide of zinc, and simple ointment, and the administration of a ferro-saline mixture and calcium sulphide, the editor of the *Medical and Surgical Reporter* says that he has been in the habit of treating carbuncle in a different manner, which, however, has invariably given the best results when used in recent cases. "As soon as the initial induration announces the beginning formation of a carbuncle, from two to ten European leeches (their number depending upon the size of the carbuncle, the intensity of the inflammation, and the age and general condition of the patient) are at once applied to the indurated and reddened skin. Should it be impossible to procure leeches in time, then the antiphlogistic touch is thoroughly practised, by which is meant scarifying the parts with the point of a sharp, thin blade. Immediately after the tincture of iodine is liberally applied every three or four hours, and the part covered with absorbent cotton. Frequently the formation of pus is thus totally avoided, or, should it nevertheless occur, limited to a very small quantity. As soon as the symptoms indicate the threatening presence of pus, one small but deep incision is made, and poultices sprinkled over with Goulard's extract then take the place of the dry cotton. As soon as the pus appears upon the surface, a two-per-cent. solution of carbolic acid and water is injected every five hours into the opening, and unguent. zinci benzoatis (oxidi?), also containing two grains of carbolic acid to every one hundred grains of salve (or about nine to ten grains to the ounce), applied locally." Under this treatment it is claimed that the carbuncle either disappears by the fifth or the sixth day, or, if pus form, by the ninth or tenth day, without having given rise to any great constitutional disturbance. Internally, tonics are resorted to only when debility of the patient indicates the necessity.

Calcined Alum in Intermittent Fever.—The use of alum is not new in the treatment of malarial affections, but the possibility of its employment in place of the costly cinchona salts gives it some claim on our attention. Dr. F. Uhle, a surgeon of the Dutch army stationed at Sumatra, gives his experience with the drug in three hundred and sixty cases treated in 1884. The usual dose of dried alum was fifteen grains, the last one being taken one hour before the usual time of accession of temperature. In remittent fever it was given in the afternoon. The daily amount varied with the fever. The higher the fever and the longer the access, the larger the dose. The largest amount in one day was six grammes, while the same results were obtained in others by two grammes. Smaller doses are not effective. In twenty-two cases he reported seventeen successes; five failing. After the chills have stopped, decreased doses of the remedy should be given for a few days.

In the five unsuccessful cases there were grave intestinal complications in two, in two others there was a continued fever, and the fifth had hectic.

Finally, it is evident that alum may replace quinine, at a less price, with better taste, and without producing disagreeable effect,—at least in pure intermittents. What the character of the other cases may be that are best treated by alum remains to be demonstrated by further observation and experiment.—*Bull. Gén. de Thérapeutique*, September 15.

Recurrent Laryngitis.—Prof. E. Fletcher Ingals, in a paper read before the Illinois State Medical Society, calls attention to the relation of cause and effect existing between recurring attacks of laryngitis and obstruction of the nares, or ordinary catarrh, and makes practical suggestions as to treatment. He concludes as follows:

1. Recurrent laryngitis is usually dependent upon obstruction of the nasal cavities.

2. This obstruction, in the majority of cases, is caused either by deflection and thickening of the septum, or by what is known as hypertrophic catarrh.

3. To effect a permanent cure the obstruction must be removed.

4. The operative procedures necessary for the removal of these obstructions may be made painless by the use of hydrochlorate of cocaine.

5. This method of treatment, properly carried out, may be relied on to cure the catarrh and the laryngitis which it has caused.

6. Great improvement in the general health often results from the removal of the nasal obstruction.

7. In acute colds or exacerbations of hy-

pertrophic catarrh, immediate relief may be obtained by the insufflation of small quantities of cocaine.

The lecturer, in the treatment of acute colds, uses cocaine, four parts; starch, sugar of milk, ninety-six parts, in fine powder. A small quantity to be blown into the nares at bedtime.— *Jour. Amer. Med. Association*, December 5.

Treatment of Cholera by Enteroclysis.—During the epidemic of cholera in Naples last year, Prof. Cantani had abundant opportunity of witnessing the effects of a method of treatment which he highly recommends (*Il Morgagni*), by copious tannin injections into the blood and warm saline hypodermic injections. He considers an attack of cholera to be divided into two marked stages,—1, of infection; 2, of intoxication. The slowing and final arrest of the circulation is due to cardiac failure and progressive thickening of the blood. In order to prevent this, he proposes replacing the water lost by hypodermoclysis. Attaching great importance to the development of ptomaines in the intestinal tract, he considers that the poisonous process is efficiently checked by copious enemata of astringent and antiseptic solutions. The amount of fluid must be large enough to pass the ileo-cæcal valve and irrigate the small intestine. The solution he employs varies in strength from one per cent. to two grammes of tannic acid to the pint of water, at a temperature of 39° to 40° C. (104° F.).

Valerianates in Melancholia. — Dr. S. A. De Foe, of Washington, New Jersey, writes to the *Medical Brief* that a combination of the valerianates of zinc, iron, and quinine works like a charm in cases where fretfulness and worry threaten to develop chronic melancholia. He used Schieffelin & Co.'s soluble gelatin-coated pills, containing one grain of each of the above-named salts. Having tried this formula in many cases, he pronounces it a specific for the worry of nervous women, melancholia, and incipient insanity.

MISCELLANY.

The International Medical Congress of 1887.—A meeting of members of the medical profession interested in the International Medical Congress in 1887, to which prominent medical men from a number of cities were invited, was held at the hall of the College of Physicians, Philadelphia, December 4, 1885, Dr. D. Hayes Agnew in the chair.

It was stated that official notice had been given of the election, as members of the present Executive Committee of the Congress, of Drs. J. S Billings and J. M. Browne, of Washington, District of Columbia; Christopher Johnston, of Baltimore; George J. Englemann, of St. Louis; and J. M. Da Costa and William Pepper, of Philadelphia.

A general and strong expression of opinion was made in support of the American Medical Association and its Code of Medical Ethics, and sincere regret was expressed that hasty action on the part of the Association, and the introduction of false issues, had imperilled the success of the Congress. It was made entirely evident, however, that the acceptance of the above elections would not be regarded as affording any adequate guarantee for the future scientific conduct of the Congress, and consequently would not be followed by any co-operation on the part of the leading members of the profession now unwilling to join in that work. As an evidence of the earnest desire which is felt for the restoration of harmony upon this subject, and for the reorganization of the Congress on a basis which would command general support, and thus insure success, the view was unanimously expressed that if the present Executive Committee should unite with them the Original Enlarged General Committee, and recommence the organization *de novo*, this course would insure the desired result.

Kansas City Medical Index.—A change has been made in the editorial staff of this progressive Western journal. Drs. Browning, Drake, and Adams have retired, and Dr. John W. Elston, the founder of the periodical, has associated with him editorially Dr. Emory S. Lamphear, who has already had considerable experience in medical journalism. We wish the *Index* success in its efforts to elevate and unify the profession and to establish medical societies and local sanitary boards in its neighborhood. We are glad to see that it advocates the International Medical Congress at Washington in 1887.

Colden's Beef.—Dr. Wm. Alex. Greene, Macon, Georgia, writes that he has tested the virtues and efficiency of "Colden's Liquid Beef Tonic" in his private practice in cases of general debility, weakness, depression, dyspepsia, loss of appetite, and nervous affections, when medicine had proved more than useless. He found it the best remedy he had ever used in chronic alcoholism, when the stomach is always irritable, and food is required to nourish and invigorate the drooping strength and nervous depression.

Mütter Lectures at the College of Physicians —Dr. Henry F. Formad will deliver a series of lectures before the College of Physicians, commencing December 8, and ending January 15, on successive Tuesdays and Fridays (except during Christmas week), at 8 P.M., on the Mütter foundation. Sub-

jects—"Morbid States as influenced by Embryonal Development, Anomalous Structural Peculiarities, Injuries, and the Effects of Lower Organisms, with Special Reference to Surgical Pathology."

THE PHILADELPHIA POLYCLINIC will remove in the early spring to its new and much larger building, Broad and Lombard Streets, where it is expected to open a hospital in addition to the dispensary service used for clinical instruction. The class of practitioners this year has been unusually large. *The Polyclinic Journal*, edited by the faculty, will be increased in size after January 1.

PEPTONIZED BEEF.—It would appear that the problem of an extractive of digested beef has been solved by Prof. Preston B. Rose, formerly of the Michigan State University. The general agents of this preparation, Messrs. Chapman, Green & Co., of Chicago, will be pleased to forward samples, as per their advertisement.

THE *Illustrirtes Monatsschrift der ärztlichen Polytechnik* in its November issue and succeeding numbers will publish an illustrated report of the Strassburger Erfindungs Ausstellung, which will undoubtedly be interesting and valuable. The *Monatsschrift* is published at Berne, and can be obtained from the publishers.

A RECEPTION to the members of the Philadelphia County Medical Society will be given on the evening of December 12, by the President of the Society, Dr. R. J. Levis, at his residence, Sixteenth and Walnut Streets.

BARRY'S self-registering clinical thermometers are well made, accurate, and reliable. They can be sent by mail.

DR. CHARLES WIRGMAN has been elected one of the staff of attending physicians to the Jefferson Medical College Hospital.

DR. JOHN H. PACKARD has removed his office and residence to No. 1437 Spruce Street.

NOTES AND QUERIES.

MEMORANDUM CONCERNING THE CORROSIVE-SUBLIMATE TREATMENT OF CHRONIC ECZEMA OF THE SCALP.

(WRITTEN BY BENJAMIN PARKER, A.M., M.D., WHEN OVER EIGHTY YEARS OF AGE, APRIL 4, 1842.)

Contributed by his grandson, Dr. W. Thornton Parker, Newport, Rhode Island.

"The scald head is *cured* in a few days by the following method: After cutting the hair as close as possible, wash the head every morning with soapsuds, then sprinkle on white precipitate with a bunch of cotton, like hair-powder, until it is all white. Go through this process every morning until the head is well, which will be in a fortnight. If the case is inveterate, give bark and wine during the local application. *Probatum est.*

"Sometimes a weak solution of corrosive sublimate is used to great effect. In very bad cases it is found to be more effective."

INTERNATIONAL MEDICAL CONGRESS: ACTION OF THE CAMDEN COUNTY MEDICAL SOCIETY.

At the semi-annual meeting of the Camden County Medical Society, held November 10, 1885, the following resolutions were unanimously adopted:

Resolved, That this Society approves of the action of the American Medical Association in enlarging the committee of arrangements for the Ninth International Medical Congress, in 1887.

Resolved, That the rules regulating the membership and business of the Congress adopted by the committee of arrangements at the meeting in New York, September 3 and 4, and the transference of the future management of the Congress to an executive committee, composed of the President of the Congress, the Secretary-General, the Treasurer, the Chairman of the Finance Committee, and the Presidents of Sections, be considered by this Society sufficient to silence criticism and enlist the sympathies and support of the profession throughout the United States.

Resolved, That the Secretary be instructed to forward copies of these resolutions to the County Medical Societies of New Jersey.

E. B. WOOLSTON,
President.

H. GENET TAYLOR,
Secretary.

CAMDEN, NEW JERSEY, November 10, 1885.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM NOVEMBER 22, 1885, TO DECEMBER 5, 1885.

MAJOR R. S. VICKERY, SURGEON.—Relieved from the assignment as Acting Medical Director, Department of Colorado, to date from the 16th inst. S. O. 200, Department of Colorado, November 23, 1885.

CAPTAIN C. K. WINNE, ASSISTANT-SURGEON.—Assigned to duty as Post-Surgeon, Benicia Barracks, and Attending Surgeon at Benicia Arsenal, California. S. O. 109, Department of California, November 20, 1885.

CAPTAIN WALTER REED, ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension, to take effect about December 1, 1885. S. O. 115, Department of the Platte, November 18, 1885.

CAPTAIN ARTHUR W. TAYLOR, ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect December 5, 1885. S. O. 116, Department of the Platte, November 20, 1885.

FIRST-LIEUTENANT A. R. CHAPIN, ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Robinson, Nebraska. S. O. 115, Department of the Platte, November 18, 1885.

LIEUTENANT-COLONEL JAMES SIMONS, U.S.A. (retired).—Died November 11, 1885, at Baltimore, Maryland.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM NOVEMBER 22, 1885, TO DECEMBER 5, 1885.

R. A. MARMION, SURGEON.—Detached from Marine Barracks, Washington, D.C., December 7, and wait orders.

A. M. MOORE, SURGEON.—Ordered to Marine Barracks, Washington, D.C., December 7, 1885.

HAMPTON AULICK, SURGEON.—Ordered to the "Alliance" as relief of Surgeon George P. Bradley.

GEORGE P. BRADLEY, SURGEON.—Ordered to Naval Hospital, Philadelphia.

JOSEPH SHAFER, ASSISTANT-SURGEON.—Detached from Naval Hospital, Philadelphia, and ordered to the "Minnesota."

J. H. GAINES, PASSED ASSISTANT-SURGEON.—Detached from Naval Hospital, Philadelphia, and ordered to the "Dolphin."

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, DECEMBER 26, 1885.

ORIGINAL LECTURES.

REMINISCENCES OF EARLY HOSPITAL DAYS.

An Address delivered before the Association of Resident Physicians of the Pennsylvania Hospital on its First Annual Meeting, held in Philadelphia, December 17, 1885,

BY THOMAS G. MORTON, M.D.

MR. CHAIRMAN AND GENTLEMEN,—Let me, on behalf of the older members, congratulate all who are present upon this memorable occasion that at last we can meet together in an "Association of Resident Physicians of the Pennsylvania Hospital," thus fulfilling earnest wishes hopefully entertained and frequently expressed by so many of the older residents. We have assembled to inaugurate this, our first reunion as a Society, and the occasion should not only bring pleasure and profit to each of us individually, but indirectly, at least, should also advance the welfare of the hospital in which all of us have a deep, abiding interest.

The year 1750 marked the birth of the hospital. Although during the previous year, and perhaps even earlier, the necessity for some refuge for the insane and the sick poor must have been frequently discussed by the benevolent people of this city of Brotherly Love, the earliest public and formal demonstration for this object was the presentation of the following:

"To the Honorable House of Representatives of the Province of Pennsylvania."
"The Petition of sundry Inhabitants of said Province, which Humbly Sheweth—

"That with the Numbers of People, the Number of Lunatics or Persons distempered in Mind and deprived of their rational Faculties hath greatly increased in this Province.

"That some of them going at large are a Terror to their Neighbors, who are daily apprehensive of the Violences they may commit; And others are continually wasting their Substance, to the great Injury of themselves and Families; ill-disposed Persons wickedly taking Advantage of their unhappy Condition, and drawing them into unreasonable Bargains, etc.; That few or none of them are so sensible of their Condition as to submit voluntarily to the Treatment their respective Cases require, and therefore continue in the same deplorable State during their Lives: whereas it has been found by the Experience of many Years that above Two-Thirds of the Mad People received into the Bethlehem Hospital, and there treated properly, have been perfectly cured.

"Your Petitioners beg Leave farther to represent, That the good Laws of this Province have made many compassionate and charitable Provisions for the Relief of the Poor, yet something farther seems wanting in favor of such, whose Poverty is made more miserable by the additional Weight of a grievous Disease, from which they might easily be relieved if they were not situated at too great a Distance from regular Advice and Assistance, whereby many languish out their Lives, tortured perhaps with the Stone, devoured by the Cancer, deprived of sight by Cataracts, or gradually decaying by loathsome Distempers, who, if the Expense in the present Manner of Nursing and Attending them separately when they come to Town were not so discouraging, might again, by the judicious Assistance of Physic and Surgery, be enabled to Taste the Blessings of Health, and be made in a few Weeks useful Members of the Community, able to provide for themselves and Families.

"The kind Care our Assemblies have heretofore taken for the Relief of sick and distempered Strangers, by providing a Place for their Reception and Accommodation, leaves us no room to doubt their showing an equal tender Concern for the Inhabitants. And we hope they will be of Opinion with us, that a small Provincial Hospital, erected and put under proper Regulations in the Care of Persons to be appointed by this House or otherwise, as they shall think meet, with Power to receive and apply the charitable Benefactions of good People towards enlarging and Supporting the Same and Some other Provisions in a Law for the Purposes above mentioned, will be a good Work, acceptable to God and to all the good People they represent. We therefore recommend the Premises to their serious Consideration."

This petition, which is without doubt in the handwriting of Benjamin Franklin, is not signed by that distinguished man, probably from the fact that at this time he was before the people for public office (he soon after was elected to represent the city of Philadelphia in the Provincial Assembly). The wording of this petition is at once forcible and significant, not merely advocating the needs of the sick and injured, but the insane are referred to first, as if constituting the most important subject for legislation, and in a manner which is truly humane and highly enlightened. The views thus expressed on behalf of this afflicted class were certainly half a century in advance of the times, and this document remains an imperishable monument to the

honor, intelligence, and philanthropy of the originators and promoters of this charity.

There lived in Philadelphia at this period a Dr. Thomas Bond, who was born in 1712 in Maryland; afterwards coming to this city, he became one of its most distinguished physicians and citizens. Dr. Bond was a man of very great benevolence and was universally esteemed. He unquestionably was the originator of the movement to erect the hospital, and he was, as well, the founder—in 1766—of the first course of clinical lectures at this hospital, and indeed in this country. It seems eminently fitting that this great charity should owe its inception and first impulse to the efforts of a member of the medical profession. Dr. Bond belonged to a literary society with Franklin and Bartram, and doubtless the future hospital was the frequent subject of their discussions. So much interest did they take in it that it was through Dr. Bond's personal efforts that the first subscriptions were obtained. Later, Franklin becoming interested, the subscriptions increased to such an extent that the enterprise was in a position to invoke legislative assistance in order to insure its permanent success.

The petition was read in the Provincial Assembly Eleventh Month 23, 1750 (as the civil and ecclesiastical year then commenced the 1st of March, the date Eleventh Month 23 would correspond to First Month or January 23 of ordinary chronology, and it is so endorsed on the petition). The "Act for the relief of the sick poor of this province and for the reception and cure of Lunaticks" was finally passed, and on Third Month 11 (or May 11, 1751 A.D.) it finally became a law and the charter of the hospital.

This act appropriated in aid of the hospital two thousand pounds from the treasury of the commonwealth, provided a like amount could be raised by private subscription. All who gave ten pounds or upwards were made contributors. The first meeting was held shortly afterwards in the Old State-House.

This charter provided that the contributors should meet on the first Monday in May yearly, forever, and that the rules they made should be obligatory when approved by the Chief Justice of the State, the Speaker of the Assembly, and the Attorney-General. On July 6, 1751, the managers addressed the proprietaries John and Richard Penn, in England, and asked the donation of a lot of ground on the south side of Mulberry (now called Arch) Street, between Ninth and Tenth, upon which to build the future hospital. The proprietors sent a charter and a grant for the lot of ground on Sassafras (now Race) Street between Sixth and Seventh (which is now known as Franklin Square). Both charter and lot were declined; the former because they had already received a better charter from the Assembly, the latter owing to the fact that the ground offered was inconvenient and unsuitable, because, as the managers stated, it was "contiguous to the brickmakers' grounds, from which the city hath been furnished with bricks for forty years past; that there are large ponds being constantly filled with standing water, renders the neighborhood unhealthy, and of course absolutely improper for our purpose, which is to restore the sick to health." The present lot (except the Spruce Street front, to the depth of sixty feet, which was subsequently presented by the Penns) was purchased in December, 1754, for five hundred pounds. The corner-stone of this house was laid May 28, 1755, with the following characteristic inscription by Franklin:

"In the year of Christ
1755
George the second happily Reigning
(for he sought the happiness of his people)
Philadelphia Flourishing
(for its inhabitants were public spirited)
This Building
By the Bounty of the Government
and many private persons
was piously founded
For the Relief of the Sick and Miserable.
May the God of Mercies
Bless the undertaking."

In 1794, the crowded condition of the wards in the east wing (which had been occupied since its completion in December, 1756) from the "increasing number of lunaticks excluding the sick and injured," demanded more accommodations, and the west wing was then commenced. It was finished in 1796; but the central portion was not built until 1805. The lots east and west of the hospital, and south on Pine Street, were afterwards purchased for nine thousand dollars, and afterwards were sold for three hundred and twenty-six thousand five hundred dollars, which was all subsequently expended on

improving the grounds and in erecting the buildings of the Hospital for the Insane in West Philadelphia.

Before the Pennsylvania Hospital was built, a private house on the south side of Market Street, west of Fifth, had been secured and occupied through the energy of Dr. Bond, who, with his brother Phineas and Lloyd Zachary, agreed to attend the sick gratis for two years. Drs. Grame, Cadwallader, Moore, and Redman were in extraordinary cases requested to give their services.

Into this temporary hospital, which was used four years, the first two patients were admitted on February 11, 1752, the day the hospital opened. One was a lunatic, and, oddly enough, named Shines.

In 1760 there were so many insane in the hospital that "two constables were hired to keep people away from the lunatics." The insane, after removal to this house, but prior to the building of the west wing, were kept in the basement cells, and some in the second story and attic of the east wing. I found among the records this curious note:

"Thomas Perrin, an insane patient, was allowed to eat, sleep, and live in the cupola of this wing from 1765 to 1774; he never left his cramped quarters, either in summer or winter."

He was noted for his long nails and beard, his matted, dishevelled hair, and for his insensibility to cold, since "he never," the record states, "in the coldest weather of nine winters, came near to a fire."

The day-rooms for the insane, subsequent to 1826, until their removal to the new Department, were over the present stables. The women had the northern, and the males the southern portion. The exercising-yards were the present yards and a part of the front garden. After the insane were removed, in 1840, an attempt was made to use the cells for private rooms for pay-patients, but the scheme failed.

In 1808, Drs. Rush, Physick, and Barton recommended the managers to open the wall on Pine Street opposite the centre of the house, to introduce more fresh air. Dr. Wistar united in the view, "provided it can be done without depriving the insane patients of a proper place to walk in." When the Pine Street lots were sold, it was agreed with the purchasers that the Pine Street gate, then the only public entrance, should be closed.

It is satisfactory to note how charitably the early judges in this State construed the laws when the insane were charged with crimes. In 1782, Peter Lesher, of Bucks County, was tried and acquitted of murder on the ground of insanity. Chief Justices McKean, Atlee, and Bryan wrote to the managers with regard to this patient, "As his insanity still continues, and he is not yet eighteen years of age, and has frequent lucid intervals, we are of the opinion that he may be restored to his reason by proper management."

Numerous instances are on record when the insane were brought to the hospital having been acquitted of murder and other high crimes, as "insane by visitation of God," and ordered to be kept in the hospital "until it shall please God to restore them." The insane were detained simply on the certificate of a physician.

Dr. Rush, who was elected one of the physicians in 1783, and served until 1813, was one of the most notable men of his time. He was surgeon-general of the Revolutionary army, member of Congress, one of the signers of the Declaration of Independence, and first treasurer of the first United States Mint. Dr. Rush made several attempts to ameliorate the treatment of the insane in this hospital. Their condition too often was wretched, and the care given to them was miserably inadequate. Dr. D. Hack Tuke, in his book just published, entitled "The Insane in the United States and Canada," London, 1885, gives a biographical sketch of Dr. Rush, who is referred to as "a remarkable physician and excellent man," known as "the American Sydenham." Dr. Tuke calls him the "American Fothergill." Dr. Tuke says, "I am not aware that there is anything which shows that he [Rush] was struck with the inadequate provision made for them [the insane], or their miserable state at that time in gaols and almshouses, and even in the cells of the basement of the Pennsylvania Hospital in Philadelphia. These receptacles survive as relics of the past to indicate the wretched provision made for maniacs in those days."

Among the papers which I recently discovered is a letter of Rush's to the managers, written in November, 1789, which shows that Dr. Rush had the care of the insane more at heart than Dr. Tuke has

credited him with having. In this letter Dr. Rush says,—

"Under a conviction that the patients afflicted by madness should be the first objects of the care of a physician of the Pennsylvania Hospital, I have attempted to relieve them, but I am sorry to add that my attempts, which at first promised some success, were soon afterwards rendered abortive by the cells of the hospital.

"These apartments are damp in summer, and too warm in winter. They are, moreover, so constructed as not to admit readily of a change of air: hence the smell of them is both offensive and unwholesome.

"Few patients have ever been confined in these cells who have not been affected by a cold in two or three weeks after their confinement, and several have died of consumption in consequence of this cold.

"These facts being clearly established, I conceive that the appropriating of the cells any longer for the reception of mad people will be dishonorable both to the science and humanity of the city of Philadelphia.

"Should more wholesome apartments be provided for them, it is more than probable that many of them might be relieved by the use of remedies which have lately been discovered to be effective in their disorder."

During the early history of the hospital the more violent insane, as was universally the custom, were harshly controlled. Among the old papers I found a bill from John Cresson, dated 3d mo. 7, 1752, against "ye Hospital for a pair of hand-cuffs, and for 2 legg locks, and 2 large rings and 2 large staples, 5 links and 2 large rings and 2 swifells for leg chains;" and that this mode of restraint was customary is shown by two letters from a patient to the managers. In the first, dated September 20, 1782, the writer says, "I am confined here in chains at the instance of a relation of my wife's. I hope you will desire the steward to unchain me, but as his duty he could not do less." On September 25 he again writes, "The present serves to inform you that, pursuant to your orders, I am unchained." Mr. Wm. G. Malin, who is, I am glad to say, with us this evening, and whose hospital life dates from 1825, says that he remembers but few instances, however, during this early period where chains were used, and that, although these were made of metal, they were covered with leather. Although the Pennsylvania Hospital early in its history naturally followed the prevailing custom, which harshly coerced the more violent cases, we should likewise remember that in this house nearly seventy years ago, far in advance of the times, were introduced those enlightened and humane views which later became generally accepted, and which make amusements, occupation for mind and body, consideration and kindness, with the absence of mechanical restraint, the basis of the treatment of this most afflicted class.

The very remarkable influence which this hospital, even in its early days, exerted for good in the community was due to the combined efforts of the managers and their officers, whose wisdom, broad charity, and integrity have never been brought in question; and I may be permitted to say that the constant personal attention of the managers, and their recognized care in the selection of the medical appointments, have made an enduring name for this institution.

The "seal" of the hospital, made upon Franklin's suggestion, in 1752, represents the Good Samaritan, and is simply a typical representation of what the hospital has been doing for the past one hundred and thirty-five years.

As early as 1752 we find a curious resolution, which shows the care the managers attempted in the selection of its officers:

"That the physicians of the hospital, or such practitioners as are to perform operations, shall first give demonstrations of their skill and abilities in anatomy operations, dressings, and bandage, before the managers, and such others as the managers may think fit to join with themselves to assist in judging of the performance of such practitioners."

It is probable that this resolution was never carried out. The rules also for patients, made in 1752, were probably more stringent than the application of them, for in May, 1752, the first surgical case admitted (an encysted tumor) was allowed to bring her infant into the hospital with her. The record in 1756 states that "a patient judged incurable, but must perish in the streets if not admitted, is therefore allowed to enter."

In 1764 a lunatic was admitted, who was taken up in the streets naked. Up to 1767 venereal diseases were admitted on the free list; after this they were made to pay. In 1777 the British for a time occupied the hospital, and this year there were no meetings of the Board of Managers for many months, four of its members having

been banished to the wilds of Virginia as Tories. The following year the inspector-general of the British army stripped the hospital of blankets, bedding, medicines, and instruments. The latter were the finest in the country, and no restitution or reparation was ever made for the losses thus inflicted.

It is curious to read in the minutes of 1804 that the managers purchased a Dutch servant-man. The record says, "The principal object the managers had in view in buying him is to employ him in the apothecary-shop, to keep it clean and in good order, and to go on such errands as may be necessary in the Medical Department."

The hospital has always been popular, and among all classes. Prior to the Revolution considerable assistance was received from the English, more especially from the Society of Friends there, who contributed largely to its funds. The earliest gift of landed property, about four acres, near Germantown, came during the first year of the hospital history, from Matthew Koplin, a German gentleman. The donor wrote to Christian Sauer, who was a Dunkard, and the founder of the first Pennsylvania newspaper, and who was a great friend of the hospital movement, that

"The proposed institution has not such a foundation nor is like to become such a hospital as I have seen and known in Germany, where great sums of alms were collected and ill used, according to the affection of the single master of the hospital, governed by self-love, enriching themselves and favoring their friends, so that they lived in plenty, superfluity, and voluptuousness, insomuch that they could keep horses and coaches for themselves like rich people, although they had nothing before, nor any income but out of the funds of the hospital, when on the contrary the poor and needy were not taken care of according to their necessity, because it was consumed otherwise."

In reply, the Board say, as a caution to future managers against such misapplications, they "have ordered this letter to be copied within their Book of Minutes, that it may be preserved to posterity as the testimony of the original intentions of the founders of this pious institution."

In 1760, a sum of money having been contributed by the acting of a stage-play, the managers in accepting this thought it necessary to give their reasons for receiving "so profane a donation."

In 1764 the celebrated Whitefield gave the hospital five pounds, and in 1765 he preached a sermon, at which more than one hundred and seventy pounds was collected and sent to the hospital.

"Rich widows and other single women" were solicited to subscribe, which they did handsomely. Jury-fines, contested sums of money, sums in the hands of trustees, assignees, and others, not claimed, and fees of various kinds were all sent here, thus showing the interest felt in the early days of the hospital. Time will only permit me to refer to some of the early gifts to the institution, the most conspicuous being that of the picture of "Christ Healing the Sick," by Benjamin West, promised by him in 1791, but which did not reach the hospital until late in 1817. Other gifts, not so valuable pecuniarily, though intrinsically beyond price, were also received. The chair in which our chairman rests belonged to William Penn. It was given to the hospital by Henry S. Drinker in 1810, and is said to have been used by the founder of Pennsylvania when giving audiences to the Indians at Pennsbury Mansion. The William Penn brass candlesticks, given about the same time by John Hulme, were unfortunately sold for old brass by a former matron. The fine marble bust of "Penn," now at the Insane Department, was presented by Traquair in 1802, and is said to have been the first executed in this country. The leaden statue which adorns the lawn in front of the hospital was given in 1804 by John Penn, the grandson of William Penn.* The excellent portrait of Samuel Coates, who served the hospital as manager from 1785 to 1825, more than forty years, was painted by Thomas Sully, and by him presented to the institution. The portrait of Sir Astley Cooper was presented by the late William R. Clapp, who was librarian for many years.

The hospital has at times sustained some unavoidable monetary losses, though in a manner over which the management had no control. Especially was this the case in the years 1779–80–81, when loans and other debts due the hospital were paid off

* The statue of Wm. Penn was originally the property of Sir Francis Dashwood, who was Lord Le Despencer from 1763 to 1781, and stood in West Wycombe Park. His successor did not admire the Founder of Pennsylvania, and sold the statue for its value as lead. It was found in a London junk-shop by a grandson of Penn, who bought it and presented it to the Hospital.

in Continental money, then so depreciated that the loss was estimated at forty thousand dollars.

From the earliest times it was the custom of the students in physic to walk the wards with the hospital physicians. In 1763 a fee was required of those who were not apprenticed to the physicians. At this time the library and the fund to support it came into existence. The physicians on May 31, 1763, state, "That as the custom of most of the hospitals in Great Britain has given such gratuities to the physicians and surgeons attending them, we think it properly belongs to us to appropriate the money arising from thence, and propose to apply it to the founding of a 'Medical Library' in the said hospital, which we judge will tend greatly to the advantage of the pupils and the honor of the institution." Such was the origin of this great collection of books, for a long time unequalled on this continent, and now surpassed by few libraries exclusively medical. It now contains fully fifteen thousand volumes, besides many pamphlets, kept in excellent condition.

The first medical book which formed the nucleus of the library appears to have been a present, in the year 1762, from Dr. John Fothergill, an English physician, highly distinguished for benevolence and professional skill, and a member of the Society of Friends. Dr. Franklin once said of him, "I can hardly conceive that a better man ever existed." This gift probably suggested the idea of establishing a medical library. Dr. Fothergill was thanked for an experimental history of the "Materia Medica," by William Lewis, F.R.S., London, 1761; and donated by him for the benefit of young students in physic.

The "Medical Fund" increased rapidly, more than was thought could then be judiciously expended in books, so that upon the suggestion of the medical board one thousand dollars was given from the fund, by the consent of the physicians, to finish the library. Eighteen hundred dollars in like manner was appropriated to complete the operating cupola-room. The apothecary-shop subsequently received fifteen hundred dollars; and thirteen hundred dollars went to purchase clothing for poor patients, for stoves, fuel, and fencing a large amount, and nearly five hundred dollars was paid to Sully for the large portrait of Rush now adorning the landing-place of the principal stairway outside the library door.

It has been a matter of consideration whether more good could not be accomplished if the library, instead of remaining here, were placed on deposit with the College of Physicians, the owner of a fireproof building in the city.

The resident physicians in olden times were charged with all the books lost or missing from the library during their terms of service. Dr. James Hutchinson and others were thus charged with books lost or mislaid. Dr. Joseph Hartshorne is mentioned as a delinquent for four octavo volumes; Dr. C. S. Hopkins, besides being charged with a very large number of lost books, had charged against him one hundred and five tracts. The care of the patients was intrusted to students who lived in the house; they also acted as apothecaries, although now and then professional apothecaries were engaged for a salary. In 1770, William Smith, an apothecary, was imported from England. He received one hundred pounds a year, "with good and sufficient meat, drink, washing, and lodging, such as is necessary, usual, and customary for one in his station." His bond was very carefully executed and signed in London. When apprentice students were introduced, this plan was abandoned, so that from 1787 to 1821 the duties of apothecary were performed by the medical apprentices.

In 1820 the present system of resident physicians was adopted. In the admission books of early times we find patients admitted with some strange diagnoses,—"eruptions all over," "a very bad sore leg," "a rotten leg," "a bad eye," and "a very bad sore head;" and one had "a bad cough and short breath," and another "a decay." The apprentices (some of the early ones also acted as stewards) were indentured to the hospital by a bond which in its provisions seems rather iron-clad. Fortunate indeed have been some of the residents of later times, that no such security is demanded.

Jacob Ehrenzeller received the first appointment as medical apprentice, in 1773. He was indentured to serve five years and three months. He had leave to attend lectures out of the hospital during the last two years of his apprenticeship, and enjoyed the privilege of the hospital lectures free of expense. There were three appren-

tices. The oldest became a graduate before the expiration of his indentures. John Saxton, the steward, in 1774 applied to apprentice his son, aged fourteen years, for seven years.

The managers made some very strict rules; for instance, they resolved that

"The apprentices shall on no occasion be absent from the house without leave expressly obtained from the sitting managers; they are to look for no indulgence by leave to attend parties of pleasure or places of amusement, nor to be abroad in the evening; nor will it be considered for their benefit to receive visits at home,—none of these things making any part of the views of careful parents or friends in placing them, nor of the managers in securing them as apprentices."

In 1814, John Rhea Barton, who was subsequently elected and served thirteen years as an attending surgeon, was indentured to the hospital for five years; his bond reads:

"During which time the said apprentice his said masters faithfully shall serve, their secrets keep, and their lawful commands every way obey; he shall do no damage to his said masters, nor see it done by others, without letting his said masters have notice thereof; he shall not waste the goods of his said masters, nor lend them unlawfully to any; he shall not commit fornication nor contract matrimony within the said term; he shall not play at cards, dice, or any other unlawful game, whereby his said masters may have damage. With his own goods, or the goods of others, without license from his said masters, he shall neither buy nor sell; he shall not absent himself day or night from his masters' service without their leave, nor haunt ale-houses, taverns, or play-houses, but in all things behave himself as a faithful apprentice ought to during the said term."*

The said John Rhea Barton further covenanted to "provide himself with a feather-bed for his own use, which bed he is to leave in the hospital when he leaves it." He also agreed to deliver up the books in the medical library and articles in the museum as they were delivered to him, etc.

For all this it was covenanted

"That the said masters shall use the utmost of their endeavors to teach, or to cause to be taught or instructed, the said apprentice in the trade or mystery of an apothecary, and provide and procure for him sufficient meat and drink, room to lodge in, and washing fit for an apprentice."

That the managers of this hospital recognized the ability and faithfulness of the medical apprentices is well shown in the parting with Dr. Joseph Hartshorne, in 1806, who resigned one month prior to the expiration of the term for which he was elected as an apprentice, in order to take a voyage to India. The minute states, and I quote only a small part, "that his conduct has been uniformly such as to merit the entire approbation of the managers and patients, and to secure him their esteem and highest respect. In the practical duties of his profession he has displayed, under the inspection and advice of six of the most eminent physicians and surgeons of Philadelphia, a skill seldom to be met with in a practitioner of his years, and the uncommon success with which his practice was marked left us no cause either to regret or to diminish our confidence in him."

Dr. Hartshorne became one of the most distinguished physicians that Philadelphia has produced: he died in 1850. One who knew him well said of him, "He was the most scrupulously truthful man I ever knew." The estimate the Board of Managers placed upon him was thus fully realized.

The first matron, elected in 1751, served nine years, during which period she also acted as steward. She received twenty pounds a year, and firewood, provisions, and accommodations for herself and two children. The stewards, the first having been appointed in 1758, seem to have acted in various capacities.

The bill of John Story, in 1779, charges for services as steward, physician, resident apothecary, and surgeon, for three years and seven months; and it seems, from one of the items, that his daughter had been for years the hospital cook.

Curiously enough, two burials have been allowed in the garden of the hospital. The first was that of Charles Nicholes, in 1808; the other was the wife of Stephen Girard, in 1815.

The grave of the former is directly opposite the present entrance; that of Mrs. Girard is a few feet to the west. The north wall of the present clinic-room rests upon these graves, so that the marble tablet which marked the grave of Nicholes, in

* This form of indenture appears to have been in common use during the early part of this century in Great Britain. (See *Philadelphia Medical Times*, vol. xv. p. 336.)

1868, was necessarily removed when the amphitheatre was erected. Charles Nicholes, in his will, requested that his body be buried within the limits of the yard, and left the hospital five thousand dollars. He directed his grave to be enclosed by a palisade, with a monument and a suitable inscription, and one thousand dollars was bequeathed for this purpose. To his physician and executor, Dr. Rush, he left one hundred dollars to write the inscription. The hospital has since continued to receive the benefit of this legacy, which the managers, in their minutes, then stated was "the largest ever bequeathed to the hospital by an individual." The grave of this benefactor of the hospital is now unmarked, and his tombstone lies neglected, broken and defaced, far from his remains.

This temporary omission to fulfil such a trust will undoubtedly soon be rectified. Dr. Rush stated that Nicholes, who was born on the island of Jersey in 1759, came to this country when very young. By strict integrity in mercantile business he accumulated in different parts of Europe and the United States about twelve thousand dollars, all of which he bequeathed in public charities. He informed Dr. Rush that no one living had any claim upon his duty or affection. He died December 31, 1807.

Stephen Girard's wife, Mary, was admitted for the first and only time as an insane patient, August 31, 1790, and died here September 13, 1815. In the month of January, four months after her admission, the sitting managers reported to the board their apprehensions that she was pregnant, and they called on Girard to take her home; but she was retained at his special request, and on March 3, 1791, was delivered of a female child, by Drs. Hutchinson and Gardener, just six months and three days after her admission into the hospital.*

I have thus given you some of the incidents connected with the early history of this institution. Many of these are new; they have all an interest. Some of these I have obtained in the discovery of ancient papers of the hospital which recently I made, others have been taken from the hospital records, and others were found for me by Mr. Malin, our friend of many years, around whom cluster so many happy associations. I know that I express the earnest hope of all present in saying, may he long be spared, to share with us the pleasures of our annual meetings.

I could not bring these remarks to a close in a more fitting way than by passing in review the many contributions which the medical officers of the hospital have rendered to science, and the service it has thereby been enabled to render medical education in this country, directly and indirectly, in its long and honorable career. During this long period of usefulness it has been utilized for the benefit of medical science, not only by training its medical apprentices and students and the thousands of students and physicians who have annually crowded its amphitheatre, but it has also been made to contribute very largely to the literature of medicine of the day.

The medical officers have been usually men of large attainments, and have frequently contributed to the medical press interesting reports, essays, monographs, and systematic works, and have originated, while in actual service of the hospital, not a few novel methods of treatment, which have since become the general property of the profession. However, as I understand that these will be considered in the paper to be read by our chairman, it will not be necessary for me to refer to them in detail.

In bringing these remarks to a close, allow me to express my gratification at seeing so large an attendance here this evening, many having come from a distance. May this be but an earnest of the future prosperity of the association which we have this evening so auspiciously inaugurated!

* This, the only child of Stephen and Mary Girard, died August 29, 1791.

ORIGINAL COMMUNICATIONS.

REMARKS ON THE CLIMATE-TREATMENT OF PULMONARY CONSUMPTION.

Read before the Philadelphia County Medical Society, December 9, 1885,

BY J. C. WILSON, M.D.,

Physician to the Philadelphia Hospital and to the Hospital of the Jefferson College.

THE subject of the climate-treatment of consumption is, Mr. President, much too comprehensive to be adequately discussed in a single evening. When we consider that this subject has a very extensive literature of its own; when we recall

in this department of therapeutics the labors of Weber, Bennet, Sparks, Jourdanet, Beneke, and others abroad, and of Flint, Loomis, Dennison, Geddings, Tyndale, and Kenworthy, in this country; and when we glance at the difficulties of the subject itself, which embraces many unsolved problems, it is apparent that in a brief paper salient points only can be taken up, and that even these must be treated in a manner suggestive rather than exhaustive. If, in the course of my remarks, particular localities are mentioned, it will be rather by way of illustration than with any view of attempting to describe them or their merits.

To the practitioner, the main questions that suggest themselves are two. First, what individuals are likely to receive benefit from this treatment? and, second, to what particular localities are such individuals to be sent?

I regard the answer to the first of these questions as fraught with the most serious responsibility. It is not enough to determine that any particular patient is likely to be benefited by a change of climate, but the decision must in every case be influenced by numerous collateral considerations of importance. These relate to the occupation of the patient, his family ties, means of support, habits, mental peculiarities, and the like. As a matter of fact, the proportion of patients who are able to avail themselves of the treatment by climate is necessarily a small one, the expense being such that few can afford it. For the majority, this treatment means, in a word, the abandonment of home and of family and business interests, which are scarcely less important than health itself, for a search after health which proves too often a vain one. These sacrifices are the more difficult to make, for the reason that, to secure the desired end, they must in most cases be made at a time when the patient is still able to pursue his ordinary avocations and is indisposed to regard himself as an invalid. For the poor, then, or those who have others dependent upon them, the climate-treatment of consumption is too often unavailable. More fortunate are they whose means and personal independence permit them to undertake those changes of residence which offer the best promises for restoration to health, and at a time when these promises are likely to be fulfilled. Too often among this group are those in whom the character of the disease and the family history may give rise to fair doubts as to the expediency of an exile from home and friends as a means of treatment. I refer particularly to individuals whose family history shows a strong predisposition to pulmonary consumption of rapid form and developing in early life. The risks of sending such individuals away from home, especially if they are obliged to go alone, are such as to make a careful physician hesitate, even though the evidences of phthisis may be as yet slight.

The question as to the time at which patients are to be sent away is of cardinal importance. Those will derive most benefit from change of climate who make it at an early period in the course of the disease. On the other hand, there is little doubt that lives are often prolonged and made comfortable by change of climate after the disease has made very considerable progress. Less regard is to be paid, in this connection, to the stage of the disease as indicated by the physical signs than to its previous course and rate of progress, and to general constitutional conditions relating to strength, nutrition, appetite, digestion, the presence or absence of fever, and the like. The phthisis of young persons of a bad family history, that form characterized by sudden onset, rapid development, and fever from the beginning, is little likely to be arrested by climatic change. To such persons, who are usually unwilling to recognize the gravity of their illness, travel and hotel life are attended with extreme hardship. They constitute a large proportion of those to whom the climate-treatment of consumption does more harm than good. Patients likely to derive the greatest benefit from change of climate belong to one or the other of the following groups of cases: first, those with a bad family history, in whom the climate-treatment is adopted early; second, those in whom the disease is of slow development; third, those in whom the physical signs of pulmonary lesions are associated with slight or only moderate constitutional disturbance; fourth, cases of fibroid phthisis which are the result of long-continued recurrent or chronic bronchitis, particularly those forms which develop in middle life and are of slow progress, and in which the symptoms are aggravated by vicissitudes

of the weather. Many of the patients forming these groups can scarcely be classed as invalids, and are always unwilling to regard themselves as such. Hence they are with difficulty induced to make those personal sacrifices which the climate-treatment demands. He will reap most benefit from change of climate who still has the strength and health to live in the open air, to amuse himself, and to be occupied in mind and body; he the least who finds himself an invalid, feeble, wretched, suffering, away from home and friends, too weak for occupation, too wretched for amusement, a stranger in a strange land. We must not overlook the facts, also, that the exile must in many cases be a long one, that the cure is often found to have been only apparent when the patient returns to his city-life and his old occupation, and that the *poitrinaire*, having found a climate that suits him, does wisely if he takes up his permanent residence in it.

When we come to the consideration of the second main question, — namely, "Where are we to send our individual patient?"—we encounter difficulties still more important. It is no easy task to determine beforehand with precision what particular locality will most benefit a given patient. Whilst the difference in this respect between mountain and maritime climates is probably less than has been thought, it by no means follows that the choice is a matter of indifference. On the contrary, it has been found by experience that, from the therapeutic standpoint, climates useful to certain individuals are disastrous to others. We must here consider also many collateral subjects which relate to the physical and mental well-being of our patient: the character of the life, society, comfort of living, food, amusement, too great congregation of other invalids, etc. Nor must we overlook the necessity for skilled medical advice in case of emergency, its desirability at all times. A multitude of matters demand careful consideration in the selection of the locality. Many of these are difficult to ascertain; the sources of information are not always satisfactory; yet more knowledge concerning them than is sometimes possessed by the physician would save much unnecessary expense and trouble and loss of precious time on the part of the patient. One of the objects of the recently-organized American Climatological Association is the accumulation of reliable data of all kinds in reference to the health-resorts of this and other countries.

The reputation of particular localities in the treatment of phthisis must have been originally the result of observation, and must have depended upon the recognition of two facts: first, the slight prevalence and low death-rate from phthisis in a given locality; and, secondly, the improved health of individuals suffering from the disease after coming to it. The reason why the climate of particular localities is beneficial is only now being scientifically worked out with great labor. It has been suggested that the immunity from phthisis in situations which are sparsely settled may be due not so much to climatic influences as to the fact that these situations are free from influences which contribute to the prevalence of the disease in cities and other thickly-settled places, such as in-door occupation, overcrowded dwellings, etc.

Various attempts have been made to classify climate, with more or less want of success, for, as Yeo suggests, in most instances what has been gained in precision has been lost in accuracy. This observer regards as well grounded the fundamental division into (*a*) sea or insular climates, (*b*) inland or continental climates. Other divisions have been suggested, as into (*a*) dry and (*b*) humid; or, again, into (*a*) the climate of plains and (*b*) the climate of altitudes; or, again, into torrid, warm, temperate, cold, or polar climates. Dennison, of Denver, has suggested a classification of climates based upon an equitable combination of the humidity statistics of the atmosphere, his object being to rate the sections according to their records in such a way as to indicate numerically the relation in respect to cloudiness, relative humidity, and absolute humidity. Finally, Germain Sée divides climates into three categories, viz.: (1) warm maritime climates; (2) climates of altitudes, which are necessarily cold; and (3) climates of low countries, not maritime.

Broad generalizations in regard to the climate of particular localities are, however, apt to be misleading. The climate of a place is in reality the sum of influences relating to its temperature, altitude, soil, drainage, vegetation, cultivation, popula-

tion, prevailing winds, and its nearness to or distance from large bodies of water on the one hand or abrupt mountain-ranges on the other. Variations in any one of these factors may occasion important modification. We all understand the value of sunshine in our rooms; but in most winter-stations, whether in high altitudes or upon the sea-coast, the differences between rooms with a northern and those with a southern exposure are such that the former are practically uninhabitable, and no traveller in Italian cities has failed to be impressed with what might be termed the difference in climate between the sunny and the shady side of the street. A cardinal error, therefore, is that of regarding climate solely from the stand-point of the meteorological data of a place or region.

The general properties of maritime climates may be briefly summed up as follows: (*a*) humidity, uniformity of temperature between winter and summer, as well as between day and night, with sudden changes determined by local influences; (*b*) high barometric pressure, with marked though regular oscillations; (*c*) an alternation of land and sea breezes; (*d*) abundant sunlight; (*e*) abundance of ozone, the excess of which is due to the physico-chemical action of sunlight, evaporation, and the motion of the air. It is possible that the presence of ozone in large amounts has much to do with the favorable influence of sea air upon nutrition; (*f*) comparative or absolute freedom from organic and inorganic impurities in the atmosphere, except malaria, which is occasionally present. Of minor importance is the presence of saline particles suspended in the air, such as small amounts of iodine and bromine in combination.

Beneke discovered in 1872, as the result of experimental investigations into the action of sea air conducted on the isle of Norderney in the North Sea, and of mountain air at a point near Interlaken, that heat is lost from the self-same apparatus more slowly on the tops of mountains than on the shores of the North Sea, and this notwithstanding the fact that the mountain-temperature was almost constantly lower, a circumstance which would have led us to expect a more rapid loss. He also observed at the sea-shore increased tissue-change, manifesting itself by an increased elimination of urea and sulphuric acid, diminution of uric and phosphoric acid, and increase of body-weight.

Beneke observed, in addition to these facts, in the sea-climate, slight slowing of the respiration and of the pulse, which he ascribed to the increased barometric pressure and to the humidity. The favorable results of warm maritime climates in the treatment of phthisis appear to be due in part to the increased barometric pressure favoring the entrance of larger amounts of air into the lungs; to the frequent and often rhythmical variations in the barometric pressure, which directly favor the action of the organs of circulation and respiration, and effect indirectly an unquestionably favorable influence upon organic life. They are partly due also to the large amounts of ozone present and to the absence of organic and inorganic impurities in the atmosphere. Certain observers ascribe the beneficial influence of sea-climate wholly to conditions which render it unfavorable to the support and development of the tubercle-bacillus.

This category includes the climates of the sea, small islands, the coast-line, and peninsulas. Among maritime climates in this country suitable for winter-stations for those suffering from consumption are those of the peninsula of Florida and of Southern California. Important as they are for the climate-treatment of other conditions, Atlantic City, Cape May, and Old Point Comfort can hardly be regarded as adapted to the climate-treatment of phthisis; but this does not apply with equal force to all Northern sea-side resorts, for Newport possesses peculiarities which unquestionably exert a favorable influence over the course of certain chronic pulmonary disorders.

It is very easy to recognize what is meant by a sea-climate. When, however, we come to speak of mountain-climates, we are at once met with a difficulty which must be overcome by a purely conventional arrangement. This difficulty relates to the altitude. The limits of high-altitude climates extend from about three thousand feet to seven thousand feet. Below this belt the climate could hardly be regarded as a climate of high altitude for therapeutic purposes; above it, except for occasional purposes and short periods of residence, the climate is undesirable.

The general properties of high-altitude climate are (*a*) its lower temperature.

The medium loss of temperature is 1.8° F. for every five hundred and twenty feet of elevation during summer, and every nine hundred and ten feet during winter. It follows from this that the summits of mountains are relatively much warmer in winter than in summer. Actually, however, the temperature is not only lower, but there are greater differences between day and night than at the sea-shore. (*b*) Diminished humidity, although in this respect there are great variations, which depend in part upon the configuration of the land (acting by modifying condensation), and in part upon the presence or absence of vegetation; (*c*) greatly-diminished barometric pressure in proportion to the height, without the rhythmical variations of sea-climates; (*d*) abundant sunlight; (*e*) excess of ozone; (*f*) comparative freedom from organic and other impurities.

At the beginning of a sojourn in a high altitude the heart's action is increased in energy and frequency; this increase, however, is of short duration. The respirations are also at first more frequent and deeper, and the thorax becomes slightly enlarged; but these changes are likewise transient. The amount of oxygen inspired is said by Jourdanet to be diminished. The elimination of water and carbon dioxide by the lungs is increased; tissue-change is also increased; the appetite is augmented, and nutrition is favorably influenced. The climate of high altitudes may be said to be somewhat stimulating to most of the functions of life.

The most important regions of high altitude in this continent adapted to the treatment of pulmonary phthisis are to be found on the eastern slopes of the Rocky Mountains, the plateau of New Mexico, and the little known grand plateau of Mexico.

Germain Sée, in summing up the characters constituting the most important climatic factors of mountain and sea air, points out that they possess in common great purity, abundant light, and excess of ozone; and that, on the one hand, the presence of traces of bromine and iodine renders sea-air antiseptic, and, on the other hand, the cold of high altitudes has a similar effect. The most striking difference between them relates to the barometric pressure. The apparent contradiction that the increased pressure of the sea-level and the diminished pressure of high altitudes exert a like favorable influence upon the course of phthisis he seeks to explain by the fact that the air in both these localities is unfavorable to the existence of the bacillus tuberculosis. It seems to me more probable that the apparent contradiction is simply an illustration of the adaptability of the human organism within limits to varying conditions.

Certain localities, neither maritime nor mountainous, have enjoyed a great reputation in the climate-treatment of phthisis. Among these are Pau in Europe, the banks of the Nile in Egypt, and in this country the Adirondack region, Lakewood and other points in New Jersey, certain regions in western South Carolina and Georgia, and some parts of the interior of the peninsula of Florida. Regions of this kind, possessing a porous sandy soil and well wooded, especially when with pine, are of unquestionable advantage to consumptives. The temperature of such localities is more nearly uniform than that of high altitudes or sea-coasts as regards day and night; the relative humidity is considerable; there is protection against winds; ozone is usually abundant; and if the woods interfere with an abundance of sunlight, the difficulty is one that is easily overcome in the neighborhood of houses and settlements. It is probable that the climates just described are more desirable for patients having a marked hemorrhagic tendency than either maritime or high-altitude climates. Furthermore, these localities are, in this country at least, much more accessible than the high altitude climates, and are, therefore, better adapted to cases of uncertain prognosis.

With reference to maritime climates, hemorrhagic cases and cases characterized by a tendency to fever should not be sent to the immediate neighborhood of the sea-shore. Individuals prone to easily-excited febrile movement do much better some distance inland. The danger of hæmoptysis in high altitudes has, I believe, been overestimated.

In conclusion, it has seemed to me desirable to avoid dwelling upon the advantages and drawbacks of particular localities, and I desire to call attention to the difficulty in obtaining accurate information in regard to the results of treatment, —difficulties that arise in part from the complex nature of local climate itself, and

in part from the uncertainty of the results, as far as obtainable by existing methods.

HYOSCINE HYDROBROMATE.

Read before the Neurological Society of Philadelphia, October 26, 1885,

BY HENRY M. WETHERILL, JR., M.D.

WE do not, as yet, know accurately the history of the discovery and introduction of this most important and valuable therapeutic agent; but certain it is that Landenberg, of Germany, was the discoverer of hyoscine and the first to investigate its properties. His observations were seconded by those of Edelfsen, Gnauck, Emmert, and others on the Continent. The English current medical literature has, I think, not made mention of it. To Dr. Horatio C. Wood belongs the credit of being one of the first to investigate its action in this country, as seen in his admirable monograph, published a few months since.

It is said that hyoscine is prepared by a rather complicated process from the alkaloid hyoscyamine, by treating the latter with baryta-water. The pure alkaloid hyoscine is so volatile and perishable that it is never available as a therapeutic agent unless combined with acids, which form with it salts of fair stability. Those at present found in the drug-market are the hydriodate, hydrobromate, muriate, and, I think, the sulphate. My experience has been wholly with the hydrobromate, and it is this salt alone of which this paper treats. The most reliable is that produced by E. Merck, Darmstadt, whose three accredited agents in New York are Lehn & Fink, Schieffelin & Co., and Eimer & Amend. It can be obtained of the leading pharmacists of this city. In its gross physical appearance it resembles small crystalline masses and granules of potassium bromide. It is light in relative weight, opaque white (but not purely so, slightly inclining to be yellowish), rather deliquescent when exposed to the air. Seen under the microscope, it was very evident that its crystallization had been facilitated by stirring, as much of it was in very irregular granular masses; but when allowed to evaporate spontaneously from its aqueous solution, it showed under the microscope handsome quadrahedral crystals springing from a granular base. These were entirely free from extraneous matters, transparent, and highly refractive.

The literature of hyoscine is rather meagre in America. Brief notices of it are to be found in the more recent works on therapeutics and materia medica. The other works devoted to this subject are Dr. Wood's monograph, the paper by Dr. Judson B. Andrews found in the *American Journal of Insanity* for October, 1885, a paper emanating from the Hudson River Hospital for Insane in the *New York Medical Record*, 1885, and some papers from the pen of Prof. John M. Maisch in the *Philadelphia Journal of Pharmacy* for November, 1885.

Hyoscine hydrobromate is freely soluble in cold distilled water; but it will be found desirable to add to this menstruum ten per cent. of alcohol as a preservative. The following I have found to be a convenient formula:

℞ Hyoscinæ hydrobromat., gr. j;
Aquæ destillat., f℥ix;
Alcoholis, f℥j. M.

In every ten minims of this solution there is $\frac{1}{60}$ of a grain of the hyoscine hydrobromate. In prescribing the compounds of hyoscine, care should be used in writing the name of the salt in full and plainly, so as not to mislead the pharmacist with the impression that hyoscyamine has been ordered, and *vice versa*, as the hyoscine salts are far more powerful than are those of its sister alkaloid.

Now, thus having described the substance at some length, what have we found to be its exact physiological effects, and what do we find to be its true place in therapeutics after a very careful and painstaking study of its action, which has extended over a period of six months, upon the patients under our care in the Pennsylvania Hospital for the Insane?

Before answering this question, let me recount the effect produced upon myself by a very moderate dose taken by the mouth. I was in health at the time. Dose, $\frac{1}{120}$ of a grain. Before administration, pupils normal, equal; pulse, 88, good; respiration, 20 per minute; skin normal; temperature, 98° F. Within forty-five minutes the pupils were evenly and moderately dilated, the voice was hoarse, face suffused, conjunctivæ injected, temperature raised to 99.5° F., respiration full, slowed to 16 per minute,

pulse slowed to 64, very full, considerable general relaxation of muscles, decided general sweat, impaired co-ordination, and a sense of fulness in the head and of wretchedness. I managed somehow to get to bed and at once fell asleep, and so continued for nine hours. Awoke much refreshed, no ill effects, everything normal but the pupils, which were yet slightly dilated, but which regained normal conditions within two hours.

Now, in regard to our results as obtained by its use in the hospital. I have no hesitation in saying that as a hypnotic and sedative it has proved most valuable in our hands. As a hypnotic, the usual range of dose is from $\frac{1}{120}$ to $\frac{1}{90}$ of a grain given at bedtime, preferably by the mouth; very frequently a less dose than gr. $\frac{1}{120}$ will be sufficient; gr. $\frac{1}{200}$ has often acted better in insomnia than has a larger quantity. It is very seldom necessary to repeat the dose; and another very decided advantage possessed by hyoscine over hyoscyamine is that small doses can be continued for a long time without increase; whereas the patient soon tolerates small and then moderate quantities of hyoscyamine, and finally resists even very large doses of it. We have given hyoscine a thorough trial in the insomnia occurring in the course of acute delirious mania, and with marked success, having succeeded, when all the usual modes of treatment had proved inadequate, in securing for the patient from six to ten hours of quiet sleep nightly for the past nine weeks, with but four or five exceptions; but one dose in every twenty-four hours, at bedtime, the amount ranging from gr. $\frac{1}{120}$ to $\frac{1}{70}$. The insomnia in these cases is one of their chief elements of danger. If it is possible to give such a case a fair amount of sleep and of nourishment in a concentrated form, the probability of a favorable issue might be entertained. In the insomnia of agitated melancholia, of the morphia habit, of alcoholism, of acute mania, of neurasthenia, of chronic mental disorder, with habitual wakefulness and motor activity, and in those confirmed cases of insomnia from unascertained cause which usually prove so obnoxious to treatment, hyoscine has been found to answer a very good purpose. It does not invariably succeed; but the failures have been very exceptional. In many instances the chronic insomnious habit has been broken so as to permit of the withdrawal of the hypnotic. It is a severe test of the value of any hypnotic to administer it in daytime, and the drug under consideration has been found to act very well even under this condition. It seems scarcely necessary to refer to the unsatisfactory and often disappointing action of the hypnotics which are now in general use, and it would seem as though this remedy is the one for which rational therapeutists have waited for so long a time.

Now, as to its usefulness as a general sedative, we have had results which justify the assertion that it is the very best means at present at our disposal for calming the motor excitement of acute and chronic mental disorders in their talkative, active, noisy, destructive, or violent phases. In this class of cases the range of doses may sometimes have to be greater than in the treatment of insomnia: from gr. $\frac{1}{120}$ to gr. $\frac{1}{50}$. I have seldom been obliged to give so much as gr. $\frac{1}{50}$, and have rarely had to give more than one dose in twenty-four hours. As an occasional exception, a patient has been found whose excitement has successfully resisted a full dose; but it must be remembered that some cases of chronic mental excitement have been dosed with varying success through a period of years, until a peculiar condition of resistance to and toleration of remedies of this class has become established. Where a large number of excited patients are congregated, even though they may be classified with care, there are a few who seem to be the cause of most of the general disorder and confusion: reduce these few to a condition of comparative quiet, and the larger but less aggressive element remains tranquil. Following out this theory in the administration of hyoscine, we have had the satisfaction of seeing wards for excited patients quite transformed in character for the better; nor can this be fairly termed "medical restraint."

I have tabulated carefully our study of the physiological action of this remedy as a hypnotic and as a sedative, and have also tabulated our experience with hyoscyamine as a hypnotic. We had found the latter so decidedly inferior to hyoscine as a sedative that it was not deemed necessary to tabulate these results; but it must not be inferred from this that hyos-

cyamine is inert; it is a remedy of no mean value, and only second in activity to its sister alkaloid.

The tabulated statements to which reference has been made will appear in the forthcoming Report of the Committee on Lunacy of the Pennsylvania State Board of Charities for 1885.

Physiological Effects.—The physiological effect of a full dose of hyoscine, say gr. $\frac{1}{60}$, is manifested within twenty minutes. These are—brief, transitory bewilderment; marked interference with co-ordination; widely-dilated pupils; slow, regular, very full pulse; dryness of the throat; relaxation of the vocal cords; very slow, full respirations, sometimes becoming Cheyne-Stokes; marked suffusion of the face and of the general surface of the body; a slight rise in temperature; and free diaphoresis, which does not seem to restore normal temperature. There is general muscular relaxation and a sense of wretchedness. Sleep usually follows, which continues from one to five hours, if the dose is given in daytime and the patient is not put to bed. This amount, administered at night, would be followed by sleep lasting for eight or ten hours. The mydriatic effect is rather transient, but usually persists through an entire day. The pulse is slowed about twenty beats per minute, and this effect gradually wears away during eight or ten hours, and is often followed by a very variable period of pulse-acceleration, which seems to be simply a reactionary hastening of the pulse to restore the disturbed balance of the circulation. The normal rate of respiration is gradually restored through a period ranging from three to five hours.

The rise in temperature is not an invariable result, and is frequently small,—seldom exceeding one and a half degrees,—and the balance of temperature is usually restored within two or three hours. Dryness of the throat often persists through an entire day. Suffusion of the surface of the body is usually transitory. In moderate and in small doses the effect is, of course, proportionate to the amount employed; but the same general symptoms are present, and the patient is quieted accordingly. Interference with the appetite is sometimes observed. It does not seem to act upon the bowels nor upon the kidneys.

Hyoscine is not always well borne; occasionally the following symptoms have followed the use of a moderate dose: nausea, vomiting, anorexia, dysuria, syncope, with small, rapid, irregular pulse, and with symptoms of partial paralysis of the pneumogastrics. This untoward condition occurred in a case of epileptic mania, in one of paretic dementia, in one of chronic dementia with excitement, and in one of acute hysterical mania. All of my personal experience of the action of hyoscine has been among females, and they are, I think, more susceptible to its action than are males. This is generally true of many drugs. Hyoscine is a spinal sedative of considerable activity. It had a decided influence over the spasms of a case of tetanus,—a powerful man, whose life it certainly prolonged for some hours, and who died, not from convulsions, but from high temperature: this was, I think, 108° F. before death; but post mortem it rose to 116° F. This case was not mine; but I know that the observations were accurately taken with a corrected thermometer.

Is it best to give the remedy hypodermically or by the mouth? It acts almost immediately and in rather less dose by the former method; yet we have preferred usually to give it by the mouth, as it acts very promptly when taken into the stomach, even in very small doses, and this method offers no shock to an excited or timorous patient.

Among the physiological effects of hyoscine, one or two observers claim to have frequently noticed a primary acceleration of the pulse-rate previous to its becoming slow and full. This I have not found to be the case save in two instances, and even in these two cases the effect was not invariable. There is a source of possible error to be here taken into consideration,—that the mere act of feeling the pulse or even addressing some persons causes a marked acceleration of the pulse, which may persist for some time should the patient be excited, timorous, apprehensive, or nervous.

From three observers of the action of hyoscine in another State comes the report that their anticipations of the good effects of the drug had not been realized after fair trial of an article which they thought was reliable; but there is some reasonable ground for doubt that the substance employed emanated from Merck's

laboratory. The evidence that it is a hypnotic and sedative of great value to the profession is rapidly accumulating. We have thus far found the different samples of Merck's hyoscine hydrobromate to be uniform in effect and in external characteristics, and are much pleased with its action. It has been in daily use and under close observation in our hospital practice, and we prescribe it with confidence in its activity. It is preferable to the other sedatives and hypnotics, as it is more certain and uniform in effect, convenient in administration, and free from injurious secondary effects.

TRANSLATIONS.

APHONIA DUE TO NASAL ABNORMALITIES.—In the *Revue Mensuelle de Laryngologie, d' Otologie et de Rhinologie*, No. 12, appear several contributions reporting cases of aphonia due to various abnormalities of the upper air-passages, from the proceedings of the Société Française d'Otologie et de Laryngologie. Dr. J. Baratoux reports a very interesting and curious case of a lady suffering with loss of voice, apparently due to reflex irritation from hypertrophy, particularly of the middle turbinated bone. That the loss of voice was attributable solely to this cause was an inference from the sudden recovery of the voice upon the removal of the hypertrophy with the galvanic loop. The reflex irritation in such cases is attributed to the swelling over the turbinated bone or a deviated septum, by which the sensitive area on the former is brought into contact with the latter. Dr. Breboin communicates the history of a man, 60 years of age, where aphonia was cured by the removal of a number of gelatinoid polypi of the nose; also a case of a young girl, 22 years old, in whom removal of a median hypertrophy restored the voice, which had been completely lost. Spasmodic aphonia and spasm of the larynx, due to a similar cause, is illustrated by three cases contributed by Dr. Hering. [The possibility of confounding such cases with hysterical and neurasthenic aphonia makes them of special interest both in point of diagnosis and treatment.—ED.]

CHYLOUS EFFUSION INTO THE PERITONEAL CAVITY.—An interesting case of chylous abdominal effusion in an infant is reported by Dr. M. Letulle, in which the chemical examination of the fluid obtained by aspiration was made with unusual care. The child was thirty-two months old, and suffered with an obscure hepatic affection, chronic peritonitis, and cardiac disorder (congenital?), and orthopnœa due to double hydrothorax. Tapping brought away a large quantity of ascitic fluid resembling urine. A month later another large quantity was removed, which was thicker and rather milky. In a third and fourth aspiration a chylous fluid was obtained, which contained emulsified fat. A fifth paracentesis has not been required, and the child was steadily improving under treatment when the paper was published.

A *résumé* of cases reported by different observers, twelve in number, is appended to this report, with a view to determine the pathological import of chylous effusion into the peritoneal cavity. Without going into the further details of this interesting report, we give the conclusions of the author:

1. Chylous effusion of the abdominal cavity, considered chemically, is a product which should be placed between serous and sero-purulent ascitic effusions.

2. As this liquid always is accompanied by peritoneal morbid conditions (cancerous, tuberculous, or due to new formations) more or less old, it is logical to consider it as a residual lesion. It is, therefore, a rare (or rarely recognized) form of peritoneal effusion undergoing granular fatty degeneration.

3. Until more light is obtained upon this subject, the great majority, if not the totality, of cases of ascites called chylous should be referred to the class of chronic peritonitis.—*Revue de Médecine*, No. 11.

CALOMEL INJECTIONS IN SYPHILIS.—Professor Neisser, of Breslau, uses the following formula in the treatment of syphilis by hypodermic injection:

℞ Hydrargyri chlorid. mitis,
Sodii chloridi, āā 5.
Aquæ destillatæ, 50.—M.

To this mucilage of gum arabic, 2.5 parts, might be added. Injections of this containing doses of calomel from 0.4 to 0.6, or even 0.1 Gr., may be made once a week: generally the back is preferred. Abscesses are rare.—*Deutsche Medizinal Zeitung*, November 30.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, DECEMBER 26, 1885.

EDITORIAL.

POISONOUS SEA-FOOD.

THE noxious effects in certain persons of fish as an article of diet, and particularly of shell-fish, is a matter of familiar occurrence, usually accounted for on the ground of idiosyncrasy. Individuals who are unable to eat fish may be arranged in two groups,—first, those who experience unpleasant effects, which, while annoying, are not of a serious character, consisting merely in transient gastro-intestinal derangement, with or without urticaria; and, secondly, those who suffer from acute, often alarming, symptoms referable to the digestive organs, and accompanied by nervous oppression, feeble circulation, and collapse. Upon a different principle of classification, Schreiber, of Königsberg, refers cases of fish-poisoning to two categories,—namely, those occasioned by the eating of fresh fish, and those by the eating of preserved fish,—and regards it as probable that the toxic principle in the second group of cases is a ptomaine. The grave symptoms occasionally observed in those who have eaten stale oysters and other shell-fish when more or less advanced in the state of decomposition are very probably due to this cause. Salkowski regards it as probable that the acute poisoning produced under certain circumstances by the consumption of fresh fish is due to the presence of an alkaloid; but to apply to such an alkaloid the term ptomaine would be to use this term in a much broader sense than hitherto. Up to the present time, those substances only have been designated ptomaines which have been developed through the agency of putrefactive changes in animal organic tissues. It is of interest in this connection to note (as stated by Parkes) that rotten fish are constantly used by the Burmese, Siamese, and Chinese as a sort of condiment, and without bad effects. Certain fishes in the Indian Ocean, which are used by the islanders as food during nine months of the year, become during the three remaining months poisonous, and even produce fatal effects! Here is a sort of periodical virulence, probably to be explained by some change in the food of the fishes during the period in question. Shell-fishes commonly considered edible appear to acquire in certain localities poisonous qualities. Among these is the ordinary sea-mussel (*Mytilus edulis*). Aurel Krause records the fact that in one of the first English expeditions to Alaska, in 1793, one individual died with symptoms of poisoning after eating mussels, and that others were extremely ill. The natives avoid these shell-fish at certain seasons on account of their poisonous properties, which, however, they are free from at other seasons of the year. The same author states that in 1799, in the neighborhood of Sitka, more than one hundred Aleutians lost their lives in the course of a few hours after having partaken of mussels discovered during a journey. Many other instances of fatal poisoning have occurred during the present century from the same cause. The last of these was made the subject of an interesting communication to the Berliner Medicinischen Gesellschaft, November 9, 1885, by Virchow. It occurred in Wilhelmshaven, under the following circumstances. Two vessels were dry-docked and cleaned. During this process a large quantity of sea-mussels were removed from the hulls (which, however, were not coppered) and piled upon the wharf. In the course of the day a number of the workmen and others who had eaten of these mussels fell ill. Of these, thirteen were men, of whom three died, five were women, and one was a child,—nineteen in all. The whole number of fatal cases was

four, of severe cases in which recovery took place ten, of light cases five. The symptoms in all the cases were the same. In the course of a short time or several hours, according to the quantity eaten, there was experienced a feeling of contraction in the neck, mouth, and lips, prickling and burning at first in the hands, later in the feet, dizziness without headache, and a curious feeling of lightness in the extremities. These phenomena were accompanied by an excitement analogous to that produced by alcohol, restlessness, and a sense of oppression. The pulse was hard, 80 to 90 per minute, the temperature normal, the pupils dilated and fixed. Speech was difficult and broken. Now followed a sense of weight in the limbs, stiffness in the muscles, and vertigo with continuous vomiting unattended by pain or diarrhœa. So violent were these symptoms that in one case death occurred in three-quarters of an hour, in a second, within three and a half hours, and in a third, in five hours after the eating of the mussels. The quantity which gave rise to serious symptoms did not exceed in some instances five or six mussels. Virchow's account of the post-mortem examination and of the experimental investigation of the toxic properties of the mussels themselves (in his communication to the *Berliner Klinische Wochenschrift* for November 20) is extremely interesting. Chickens and cats which ate the mussels in Wilhelmshaven were speedily taken sick and died. A large dog died in a very short time after having eaten some fragments of the mussels. A cat that simply licked the plate from which the mussels had been removed was taken violently sick, but recovered. Guinea-pigs and frogs quickly succumbed to the poison. The poisonous properties were contained not only in the cooked mussels themselves, but also in the broth and in an alcoholic extract which was prepared from them. The effects were obtained both through the stomach and by hypodermic injection. By the latter method the lethal effect was produced with great rapidity. In its powerful paralyzing properties this poison resembles curara, and merits further investigation not only from an economic but also from a medical point of view.

FEES FOR MEDICAL SERVICES.

AS the time approaches for closing the accounts of the year, the perennial question of fees may be appropriately considered. Strangely enough, with some this seems to be considered as rather a delicate one; but those who affect to despise the business aspect of professional life are either fatuous or hypocritical. The practice of the art of medicine offers an honorable means of earning a living, and hence it can be neither dishonorable nor undignified to devote proper attention to the honorarium, or "pecuniary acknowledgment," as the Code gracefully puts it. At the same time, judgment and tact are required to be exercised in order to prevent it from assuming an undue degree of importance in the intercourse with patients or the public. It is quite certain that physicians, as a rule, are too careless about their accounts, and are prone to affect indifference. The result is that the public is divided into two classes in this regard,—first, the class consisting of the select few who consider the physician's account as a debt of honor, having precedence over ordinary obligations; and, secondly, the larger class which regard it as a just claim, yet as one which they need be in no haste to discharge. Doctors' bills proverbially are the last to be paid. It is said that physicians have a larger proportion of bad debts than any other class of professional men, partly due to unbusiness-like habits and partly owing to the nature of their work, the prompt service required often admitting of no delay for discussing the terms of the contract.

A not inconsiderable amount of loss is therefore unavoidable, and their credits for services rendered to those unable to requite them must be entered in another place than their cash account.

With regard to the legal grounds for charge and the collection of claims due them, the laws are often explicit. It has been held in court that the right of a medical man to recover his charges for professional services does not depend upon his treatment having been successful, unless there is a special agreement to that effect. It depends for its legitimacy upon the skill, care, and attention bestowed, and not upon the outcome of the case: still, it must be shown that actual service has been rendered. The physician must be prepared to show that his work was properly done, if that be disputed, in order to prove that he is entitled to a reward. Where a surgeon has performed an operation which might have been useful, but which merely failed in the event, he is nevertheless entitled to charge; but, if it could not have been useful in any event, he will have no claim upon the patient.* Similarly, where a physician has made a patient undergo a course of treatment which plainly could be of no service, he cannot make it a subject of charge; but if he employed ordinary skill, and applied remedies fitted to the complaint and calculated to do good in general, he is entitled to his fees, although he may have failed in the particular instance, such failure being then attributable to some vice or peculiarity in the constitution of the patient for which the medical man is not responsible.

A physician or surgeon cannot claim reward for services required through his own negligence: thus, if he by communicating an infectious disease have rendered prolonged attendance necessary, he cannot recover for such additional service necessitated by his own want of care. This, according to Ordronaux, applies equally to puerperal fever when communicated by the attending physician. On the other hand, if a doctor's bill be not paid when presented, he is not limited by it to the amount of his claim if he can show that his services were of greater value. A physician called in for consultation or to perform an operation may recover his fees from the patient, notwithstanding that the attending practitioner summoned him for his own benefit and had arranged with the patient that he himself would pay. While a physician, in the absence of an express understanding, is only entitled to recover what is customary and reasonable for such service, yet it does not follow that all must rate their charges alike, for the value of their service differs greatly: where the attending physician intends to make an unusual charge, it would save trouble if his terms were expressly stated at the time of taking charge of the case.

In making out accounts, as well as in keeping books, it should be kept in mind that a visit *per se* does not afford ground for a charge, unless it can be shown that service also was rendered or a medical consultation held. A bill of items is required, when a claim comes before the courts, specifying the persons to whom service was actually rendered, the date of such attendance, and charges for consultations; although under ordinary circumstances, at present, an itemized bill is rarely made, except where a doubt has arisen or the amount of obligation is disputed.

* "Law and Medical Men." R. Vashon Rogers, Jr., Toronto, 1884.

A New Hypnotic Agent.—Urethane, an ether carbamic or carbamate of ethyl, is in the form of white crystals without smell, or slightly like saltpetre. It is soluble in water and in alcohol. It has been found that it has decided hypnotic effects in doses of one-half a gramme to one gramme. It is a good substitute for chloral and sodium bromide, and is without unpleasant secondary effects. It is a cerebral narcotic, and has been used to good advantage in delirium tremens and in mania. —*Pharmaceutical Record.*

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

AN eminent French judge has just publicly delivered an important opinion on the subject of professional secrets. According to French law, Article 378 of the Code, all physicians, surgeons, midwives, or druggists who may become possessed of secrets by the practice of their profession are forbidden to reveal them, except in certain cases laid down by the law, where they are obliged to denounce criminals. Infraction of the law involves a punishment by a fine of about one hundred dollars and imprisonment of from one to six months. Here two difficulties at once present themselves. A doctor might be called as a witness in a criminal case to testify to facts that have come to his knowledge in the exercise of his profession, but jurisprudence has established that he shall not testify in a way to reveal professional secrets, thus leaving it to his discretion what to say. The second difficulty is that a doctor called to attend a person who has attempted a crime or committed an act against life or property may in this case (according to an Article of the Code, No. 30, "all persons knowing of attempts on life or property are compelled to inform the authorities") find it his duty to report the crime if he knows of it when he is called, but the moment that he is in actual attendance he must be silent. Again, the doctor must not furnish any information as to the health of his patient, even in cases of proposed marriage. He can, however, delay a marriage, for instance, in the case of a patient who may be suffering from phthisis or any malady that may be acute and in danger of transmission. M. Bruno-Lacombe, the judge in question, stated substantially as above, and then said that if the prosecution turned against the doctor and sued him for damages the case is altered, and that he could then testify to all he knew. It is also claimed that the right to defence should be accorded to physicians if any serious accusation is brought against them in relation to any secrets which they may have acquired in practice. A doctor should give up any action he may have commenced for his fees (that is, non-payment of them) if the defence insists on knowing what was the character of the disease he has treated. When the marriage of any of his patients is decided upon, he should not reveal any disease they may have had, even with a view of preventing worse troubles after marriage. He must, however, tell a healthy nurse of the danger she incurs in nursing a child of his patient's who may have inherited syphilis, otherwise the nurse can sue him for damages. He can also denounce all attempts against female clients, except in case of abortion, where it would compromise the patient herself. The question was asked, "Ought a doctor, in order to save an innocent person, to denounce the criminal who may be under his care, and if he is aware of his guilt?" The answer to this is, "No." A case was cited of a trial that took place here lately, where a physician was called to see a newly-born child, and he saw that it was syphilitic. He recommended the mother to nurse her own child, and forbade the employment of a nurse; but they employed a healthy woman against the doctor's wish and without his knowledge, and the nurse got the disease. She sued the family, and the doctor was allowed to testify to the facts, and the woman got a verdict of substantial damages in her favor.

In regard to registration of births in France, Article 56 of the Code only imposes on physician and on midwives the obligation of declaring the fact of a birth at a certain house, but they are not compelled to give the name of the mother. As to death-certificates, the attending physician is at liberty to declare the real cause of death or refrain from doing so when this might injure the memory of the deceased or hurt the family.

Professor Peter is one of the most prominent men of the Paris Faculty of Medicine. In person he is quite small, short, and thin, wears a full, short beard, and still possesses what is so often wanting in younger savants, a scalp well covered with hair, which with his beard is now nearly white. His voice is of a thin, vibrant quality, but the notice of his lectures is always followed by a full amphitheatre, attracted by the doctor's great ability and his sharp attacks on some prominent scientists. Dr. Peter is a fervent apostle of the old school, and a hater of all microbes. This year he commences with "tuberculosis," and in his opening lecture he attacked the germ-theory as follows: "There are two parties in the field, the old *régime* and the new. The old party believes tuberculosis to be an intrinsic, general, spontaneous disease,—an internal modification of the human structure allied to scrofula. The new theory is that the trouble is extrinsic, the bacillus of Koch being the cause. This wonderful animal may also be found in the supposed-to-be healthy smegma of the prepuce. Lustgarten has likewise found a bacillus in syphilis that is almost identical in shape,—a little thicker, perhaps, but it is much the same thing,—and he claims that it is the *sole cause* of that dreadful disease. Extraneous causes, however, are admitted to have some share in setting up the morbid processes: in fact, this must be added in order to make out a case. It has gone abroad as if with full medical approval, with the sanction of the powerful medical press and that of many of the scientific public, that these microbes are the sole causes of disease, and the practical inference is suggested that if once we can catch them and treat them to a bath of carbolic acid, or some other disagree-

able stuff that may not agree with them (and that certainly won't agree with the poor patient), then we will be all right,—sure to cure, in fact." Becoming warmed with the discussion, the venerable professor said, "Gentlemen, *this is not true*. They mistake, I fear, the lesion for the cause, and confound it with the disease itself. It is possible, by conveying some of these microbes from an animal that is diseased, that the malady can be reproduced, if of the *right kind*,—that is, if they are *wet* and covered with the granulations and the *liquid* which contains the germs of the disease. M. Pasteur has come to tell us that he can inoculate hydrophobia, and you will notice that the marrows are *dried* to extract the poison. Well, many, many years ago, as you know, Gluge told us that there were granulations that he called corpuscles found in the human structure in a state of disease. Will these communicate hydrophobia? Rabies is supposed to be merely a parasite, although they have not as yet isolated it. Never mind: a dog won't bite with his spinal cord, but with his teeth, and the liquids of his mouth certainly carry the disease; but they also carry a host of microbes, among which I suppose it would be very difficult to detect the real one. Passing to cholera, we have been informed lately that the fewer the microbes the more deadly the disease; but this has now gone on so far that I feel it my duty to protest, and I will try to present to you hereafter the other side of the case."

M. Désguin, of Brussels, gives a new method of making an antiseptic dressing that has real merit in case of surgeons in the field, and also for doctors in country places who may be called to dress wounds and not have things ready. As a carrier he proposes to use filtering-paper that has no stiffening in it. It is cheap, and quite as effective as gauze or lint. This paper is to be wet with solutions of carbolic acid of different strengths, or with solutions of boric acid and corrosive sublimate. They are then dried, and are ready for use at a moment's notice by wetting them and applying them to wounds, placing them on sheets of gutta-percha; in this way assuring complete asepsis and allowing the surgeon to carry on the field in small bulk all the dressing he needs to carry out Listerism.

While on therapeutics, mention should be made of the excellent clinical applications that Dr. Dujardin-Beaumetz makes at the Cochin Hospital here. Everything new he tries as soon as it is out, and every year he publishes the results as fast as they can be proclaimed. He has recently issued two works upon clinical therapeutics, and new remedies based upon his service in the Hôpital Cochin.

At the medical clinic, now in full action in Paris, the larger part of the interest is divided between Professor Germain Sée, at the Hôtel Dieu, and Professor Hardy, at the Charity Hospital. Strong and wordy are the discussions which go on between them. Last year they had a great fight over the use of tartar emetic in pneumonia. We give a *résumé* of a late clinic of Dr. Hardy's on sciatica. He said, "I wish to apply before you the treatment for sciatica that is now in fashion,—that is, the chloride of methyl spray. But first I want to speak of this malady and its varieties. Sciatica is not by any means always the same. Its clinical differences often call for particular treatment. It was an Italian—Cotugno, about 1764—who first separated this disease from rheumatic pains and the other troubles that may so often affect the inferior extremity. The history of sciatica is simple. It is pain having its seat along the course of the great sciatic nerve or one of its divisions. The pain is dull,—as a rule, a mere sensation of heat,—but sometimes it is violent enough, so that the patient complains of being torn to pieces, as if he were bitten by dogs or some animal. Its manifestations are very capricious. Sometimes patients do not suffer when warm in bed. This, indeed, is usual. But, again, they may suffer more in bed than when up and about. True intermittent sciatica you will find preventing sleep and going away in the morning. This form you can cure with sulphate of quinine. Valleix well described the particular character of sciatica. These are the ideas he gave, with additions. There are always certain *points* which on pressure will augment the pain. They are situated as follows: 1st, in the vertebral column just above the sacrum; 2d, above the coccyx; 3d, at the level of the great sacro-sciatic notch; 4th, between the great trochanter and the ischium (this is the most frequent of all the points); 5th, just where the popliteus divides; 6th, behind the external malleolus; 7th, on the dorsum of the foot; 8th, on the calcaneum. You will generally find two or three of these points in every patient, rarely more. They often limp from pain, but you must see if this is not from some muscular weakness. It is possible also to find them trembling as in spinal paralysis, or with contracture of the muscles; but this is not frequent. More often you will find, on close observation, that there is a modification in sensibility. Sometimes they are hyperæsthetic, or, again, anæsthetic. A few curious cases have been noted of muscular atrophy. Some patients will complain of cold in the member, the difference not being perceptible to your hand. At other times you will find the part cold, but they do not feel it. When the trouble has existed for some time, you will often find an abundant secretion of perspiration and an exaggerated growth of hair, or, finally, there may be an eruption of vesicules. As a rule, general health is not much impaired. It is well to remember, however, that a sciatica can arise from a compression of a tumor resting on the spinal cord or in

some part along the course of the nerve. The pain here would be persistent and uniform, which will serve to distinguish it from the usually intermittent character of sciatica.

"If the trouble be on both sides, you should be on your guard, for it is an indication of a disease located in the lower portion of the spinal cord. Here you will also observe urinary troubles, such as incontinence or retention of urine. I want to insist on the importance of making the differential diagnosis in all cases between neuralgia and neuritis. If the pain, in place of being localized in special points, is *all along* the course of the nerve, and you find muscular atrophy, cold sweat, and an eruption, then you are in the face of an anatomical alteration of the nerve, a neuritis. Here the diagnosis will be all the more serious in proportion to the duration of the disease. The neuralgia is also serious, as the vast number of remedies prove which have been recommended for it. The best means of treatment are the local ones. Friction with laudanum (pure) will almost always calm the pain for a time, but it will not cure. Good results are also obtained from subcutaneous injections of morphine continued for several days. It is also surprising to see how quickly some cases will give way to injections of chloroform; but it is so difficult to get it pure, and abscesses form from using impure chloroform, so prudence is advised in its use. The old treatment of the days of Cotugno I can also advise. He applied blisters on all the painful points. They are rendered still more efficacious nowadays by being sprinkled with powdered hydrochlorate of morphine. The actual cautery and electricity I would also recommend (the latter a continuous current), but these two don't seem to have won professional support. Hot natural mineral baths also act well; and now we come to the present mode of treatment.

"Dr. Debove has proposed to apply to the sciatic the action of an intense refrigerant, the chloride of methyl spray. In using it you must pass it all over the course of the nerve, and try to freeze all its divisions. Do not let any of the ramifications of its branches escape its action. This is easy, as it will congeal the epidermis and the next layer. This mode of treatment resembles a superficial scarification over a large space, and excellent results have been obtained from it. Should the pain not cease after the first application in certain points, then you may make the application to those points only."

Dr. Vigier made an interesting communication to the Société de Thérapeutique on "Alcohol, Pepsin, and the Alkalies in Digestion," which caused a discussion in which Dr. Paul and others took part, from which it results, first, that a small dose of alcohol increases the acidity of the gastric juice, so that it would be useful in those patients in whom acidity was wanting, hurtful in the opposite sort. Next as to pepsin. It seems that it must not be combined with bicarbonate of soda or other alkali, as the ferment is thereby neutralized. Finally, M. Richet has shown that alkalies given in large doses (five to six grammes) will destroy gastric juice, so that mineral-waters having large quantities of soda and potash salts in them can only do harm in dyspepsia.

Professor Grassat gives the toxicology, hygiene, and therapeutics of sulphide of carbon. Briefly considered, it seems to have quite a number of actions. It has been employed by utilizing its refrigerant properties by evaporation as an anæsthetic, but its best action is as an intestinal antiseptic. Here it is quite efficacious, and not at all dangerous. It has been employed especially in stomach-affections attended by putrid fermentations. The following is the mode of administration:

Pure sulphide of carbon,	10 grammes;
Distilled water,	500 "

Put this in a bottle holding at least seven hundred and fifty grammes, and only take the liquor off by decantation. Then add an equal quantity each time you draw off the water, as the ten grammes of sulphide will be enough to make four or five quarts of liquid. The dose of this liquid is from six up to twenty teaspoonfuls daily (at most, five hundred grammes of it are given), taken in milk or lemonade, or in water with a little mint added.

At a Sanitary Congress of Veterinary Surgeons held in Paris last week, considerable importance was attached to the danger of alimentation with meat from tuberculous animals. Professor Arloing, of Lyons, and M. Lefebvre, of Havre, showed that it was certain, at least in the later stages, that tuberculosis in animals is a contagious disease, and a resolution was passed requesting the government to seize all such meat and have it destroyed. It was also recommended to boil all milk when its origin was not known.

A serious charge has recently been made against certain doctors. The medical profession in Paris appear not to disdain small profits. A report drawn up by Dr. Després on the Night Medical Service reveals a new dodge. This service was organized to enable persons to obtain medical aid at night. This is often difficult, as many practitioners refuse to leave their homes, excepting for their regular patients, unless they are sure of their fees. Under the system established here, persons needing a doctor apply to the nearest police-station, and an officer at once summons one of the medical men on the list, and at the same time he issues an order for the payment of ten francs on the municipal treasury. The person requiring the doctor must repay the treasury, if he can afford it; but, as a rule, it is never reimbursed, and payment is not enforced. It having been remarked that these

visits had increased in a remarkable way,—from three thousand six hundred and twelve in 1876 to eight thousand seven hundred and twelve in 1884,—the city authorities instituted an inquiry, and the report drawn up by Dr. Després reveals some very curious abuses. It seems that some needy and unscrupulous doctors were in the habit of giving the police-officer three francs of the fee every time they were called, and this induced the men to call them on all sorts of pretexts. Besides this, the usual district professionals, who are paid a salary of eighteen hundred francs a year to attend the poor of the quarter in the day-time, had got in the habit of neglecting their visits in the day so that they would be called at night and so get the additional ten francs for night-service. The Municipal Council adopted at once a resolution depriving all medical men attached to the Bureau de Bienfaisance of special fees for night-service.

There are only eight woman physicians on the regular list in Paris. The first was Madame Madeline Brés, who opened the way, she being received in 1865. It seems that at a meeting of the Imperial Council the Empress Eugénie was presiding, her husband being absent, when the application of Mme. Brés was presented. The empress was pleased at the novelty, and asked her advisers to create a precedent in the matter, and she added that she hoped to see the time when Paris would have a woman's hospital exclusively in charge of female doctors. Since that time the other seven have commenced practice. They all do very well. Several more have graduated in late years, but they have not remained in Paris. Three were Americans; and at the present time we have Mrs. Dr. Merritt, of San Francisco, who is about passing her final examinations, having passed all with success with the externat and the internat. As everything is now accorded to women, the way is now open here to the highest honors, and if they are not the coming doctor it will be their own fault. Not the slightest difference is made in the sexes, and they are assigned to any ward, male or female, as it comes, or to male or female subject to dissect, and to the same tables as the men. It seems rather curious for an American to see them helping men to dissect femoral hernia in the male, while doing Scarpa's triangle; but absolute equality is the rule. Paris has also taken a generous initiative in the matter of woman by appointing Mademoiselle Bénoit, a young woman who lately took her degree, medical examiner of girls in the municipal schools. It is her business to see that the girls in public schools are not overworked, and that they study under sanitary conditions. The education of the young in France is certainly destined to fall into the hands of women, and the care of the health of the female portion is now largely under their charge.

The rumor goes that Dr. Mathias Duval is the choice of the Faculty for the place of Professor of Histology left vacant by the death of Professor Robin. It is also said that the eminent doctor will at once commence his course of lectures.

THOMAS LINN, M.D.

PARIS, FRANCE, November 20, 1885.

THE AMERICAN PUBLIC HEALTH ASSOCIATION — THIRTEENTH ANNUAL MEETING.

WASHINGTON, December 11, 1885.

THE proceedings of the Thirteenth Annual Meeting of the American Public Health Association, which ended to-day, were somewhat discounted by the general public interest attending the assembling of Congress and the President's message. Notwithstanding these drawbacks, however, the scientific results of the meeting were of great importance.

The local committee of arrangements, under the active leadership of Dr. Smith Townshend and Mr. J. C. McGinn, made excellent provision for the comfort and entertainment of the members, and the Washington meeting will doubtless be long remembered with pleasure by all who were present.

The first scientific business was the presentation of the report of the Committee on Disinfectants, which was submitted in print, making a pamphlet of about one hundred and fifty pages. The following is an abstract of the conclusions of the committee based upon an extensive series of laboratory experiments:

The most efficient means for disinfecting the discharges of the sick suffering with infectious diseases, such as cholera, typhoid fever, smallpox, diphtheria, etc., are solutions of chloride of lime, 1 part in 25; corrosive sublimate, 1 part in 500; carbolic acid or sulphate of copper, 1 part in 20. For deodorization and disinfection of vaults and cesspools, chloride of lime mixed with plaster of Paris in the proportion of 1 part of chloride to 9 parts of plaster is recommended to be freely scattered over the contents of the vault daily.

For clothing or bedding which has been in contact with the bodies of the sick, boiling in water for at least half an hour will be an efficient disinfectant. If the articles cannot be boiled, exposure to superheated steam for one hour, or, preferably, destruction of the article by fire, is recommended. Fumigation with sulphur, as ordinarily practised, is not to be relied upon. Articles of furniture exposed to infection should be several times washed with a solution of corrosive sublimate, 1 part in 1000; or carbolic acid, 1 part in 50.

For washing the bodies of the sick, a solution of chlorinated soda, diluted with nine parts of water, may be used. A two-per-

cent. solution of carbolic acid may also be employed for this purpose.

The bodies of the dead should be immediately enveloped in a sheet thoroughly saturated with chloride of lime, corrosive sublimate, or carbolic acid solution, to prevent diffusion of the disease-germs.

During the occupancy of a sick-room no active efforts for disinfection, except thorough ventilation, are desirable; but after the room is vacated it should be thoroughly fumigated with sulphurous acid gas, burning three pounds of sulphur to every one thousand cubic feet of space, and carefully closing all openings. After twenty-four hours all surfaces should be washed with a solution of corrosive sublimate, one to one thousand, and thoroughly ventilated before being again occupied.

The report also contains directions for disinfecting rags, infected mail-matter, ships, etc., and concludes with a summary giving exact details as to the proper methods of procedure in all cases where disinfection is necessary.

A suggestive paper upon "Sanitary and Statistical Nomenclature" was read by Dr. E. M. Hunt, of New Jersey. Dr. Hunt proposed the name of "Hygieology"—the science of hygiene—in place of such less definite terms as "sanitary science," "preventive medicine," "state medicine," etc. The paper was a praiseworthy attempt to render the terminology used in hygiene more exact than at present.

An elaborate paper, illustrated by diagrams, was read by Dr. Billings, U.S.A., upon "Forms of Tables for Vital Statistics," and later in the session a committee was appointed to report at the next meeting a uniform method of registration of vital statistics.

Dr. Henry B. Baker, of Michigan, presented a carefully-prepared paper upon "The Relations of Rainfall and Water-Supply to Cholera," profusely illustrated by charts and statistical tables, showing the influence of the stage of the ground-water as conditioned by the rainfall upon the propagation of cholera. Dr. Baker showed, from East Indian records, that cholera and rainfall bore a definite relation to each other, the mortality from the disease being greater in the dry season and diminishing during the rainy period. It was also shown that wherever a pure water-supply had been introduced, the mortality from cholera had been markedly diminished. The lesson taught by these facts should be made use of in our efforts to guard against the disease in this country.

A paper showing much original work and careful observation was read by Dr. D. E. Salmon, of Washington, on "The Virus of Hog-Cholera." This animal plague was declared to be an intensely contagious disease, due to a minute organism which has been isolated and cultivated outside of the body. Inoculation with pure cultures of this organism will develop the disease.

President Cleveland, who had been invited to attend the meeting, sent a letter of regret, which was full of expressions of intelligent appreciation of the work in which the Association is engaged. In the course of his letter the President remarks,—

"Surely the advancement of sanitary science and its practical application to the public health are of immense importance to the people of our land. Of course the value of efforts in the direction of a better understanding of the causes of disease and protection against the same is too palpable for suggestion or argument. But I do not think the advantages of an improvement in the condition and sanitary surroundings of the homes of our workingmen, and of the poor among us, are sufficiently appreciated. Healthful and comfortable habitations indicate the best features of a country's prosperity and advancement, and men with good health and wholesome surroundings are apt to be contented and useful citizens.

"The difference in the death-rate of cities and localities unexplained by natural and inherent causes is of itself enough to give great prominence to the work of the Association, and if this beneficent organization shall succeed, as it ought, in impressing upon municipalities the duty of sensible and thorough sewerage, a plentiful and pure supply of water, and general cleanliness, together with a proper construction of school-buildings for the children of their citizens, it may well point with pride to its achievements."

An eloquent address of welcome was delivered by Mr. Edmonds, the President of the Board of Commissioners of the District of Columbia, after which Dr. James E. Reeves, the President of the Association, read his annual address. This was an eloquent appeal for a deeper interest in sanitary matters by the public and by those who make the laws. The National Government should make provision for the study of contagious and infectious diseases, by establishing a national biological laboratory. The amount expended for such investigations would be abundantly repaid in more thorough knowledge of prevention and cure of the diseases investigated. In touching upon the relations of the National Board of Health and of the Marine Hospital Service to the public health interests, Dr. Reeves steered very successfully between Scylla and Charybdis. Dr. Reeves deserves the thanks of all American sanitarians for his skilful avoidance of offence to either faction in a contest which has heretofore caused much bitterness of feeling among men who should, above all others, work together in harmony.

On the second day of the meeting, Dr. P. H. Bryce, of Canada, read a paper on "Small-pox in Canada, and the Methods of Dealing

with it in the Different Provinces." About three thousand one hundred deaths have occurred from the disease during the present epidemic. In addition to vaccination, exposed persons were isolated for a sufficient period, and infected baggage fumigated. The methods in use were described in detail.

A paper on "Impure Air and Unhealthy Occupations as Predisposing Causes of Pulmonary Consumption" was read by Dr. C. W. Chancellor, of Baltimore. Dr. Chancellor stated that in England one-fifth of all the deaths are from pulmonary consumption, in France one-sixth, and in Germany and Austria about one-seventh. In the census year 1880, the proportion of deaths from consumption in this country was one-eighth of the whole number of deaths from all causes.

In considering the causes which lead to this frightful mortality, Dr. Chancellor said, "Pure air is as essential to the health and vigor of the animal system as wholesome food and drink. When contaminated by stagnation, by breathing, by fires, or artificial light, such as candles, lamps, and gas, it operates as a slow poison and gradually undermines the human constitution. Too little attention is paid to proper ventilation of living-apartments. In some houses the windows are unopened for weeks and months together. Crowds of tailors, seamstresses, weavers, shoemakers, and other mechanics employed in sedentary occupations are frequently pent up from morning until night in close and sometimes damp apartments, without even thinking of opening the windows for a single half-hour for the admission of fresh air. Consequently they are continually breathing an atmosphere highly impregnated with the noxious gas emitted from the lungs and the effluvia perspired from their bodies. The sallow complexions of such persons plainly indicate the injurious effects produced by the air they breathe, and, although its pernicious effects may not be sensibly felt, it gradually preys upon their constitutions, and often produces incurable consumptions, which are frequently imputed to other causes.

"It cannot be denied that some occupations are more unhealthy than others. There can be no doubt that the inhabitants of cities are less hardy and more subject to pulmonary disease than those of the country. City people, speaking generally, are pale, of lymphatic temperament, and their muscular system is but poorly developed. Want of a free circulation of a pure, uncontaminated atmosphere is the most powerful cause of this. In addition, in cities the passions are more excitable, indulgence in eating and drinking is more common, with many life is sedentary, and the occupations are altogether more unhealthy than those in the country. Take, for example, those engaged in mercantile life,—merchants and clerks. These, for sanitary purposes, may be divided into three classes: first, those who have but little exercise, such as book-keepers; second, those who have exercise but are confined to their stores in a superheated, unhealthy atmosphere, as, for example, salesmen; and, third, those who have exercise in the open air, or who do out-door work. In the first class the digestive organs suffer, the next from diseases of the pulmonary organs, and the third from the prostrating effects induced by over-mental or bodily exertion, or by corroding care.

"Persons habitually breathing a dust-laden atmosphere, as the artisans and laborers in some manufactories, are more especially liable to pulmonary complaints. The average duration of life among the dry-grinders of forks is 29 years; of razor-grinders, 31 years; of edge-tool grinders, 32 years; knife- and file-grinders, 35 years; and saw- and sickle-grinders, 38 years. Out of every one hundred sick among the needle-makers, 70 are consumptive; and among the file-makers, 62. Taking the steel-grinders all around, a fraction over 40 in the hundred are consumptive, while one-half of the lithographers—workers in copper—have the disease. Grindstone-makers rarely live over 24 years, and the average life of the flint-cutter and glass-polisher is under 30 years, and that of the stone-cutter, 36.

"The problem of how to face this evil is, simply, how to environ each worker in the prosecution of his work with a pure atmosphere. While waiting for legislatures to accomplish this by legal enactments, it is extremely desirable, and even necessary, that consumptive hospitals should be established in every city. While European cities have provided for this purpose, American cities have generally failed to make such provision. It would be a great and truly useful work to devote an edifice in every large city to so benevolent a purpose."

Dr. E. M. Hartwell, of Baltimore, read a carefully-prepared paper upon "The German System of Physical Education," giving a history of the rise and development of the German systems of turning and physical gymnastics.

"The Debit and Credit Account of the Plymouth Epidemic" was the title of a graphic paper by Dr. Benjamin Lee, of Philadelphia. On account of the lateness of the hour when Dr. Lee's paper was called, it received far less attention than its great merits deserved. No abstract within the space at disposal can do the paper justice.

A paper filled with minute details on "Maritime Quarantine from the Mouth of the St. Lawrence to the Rio Grande" was read by Dr. J. H. Rauch, of Illinois. This was followed by an eloquent account of the system of "Sanitary Protection of New Orleans," by Dr. Joseph Holt, of that city, who devised the new system of maritime sanitation at that port. Dr. Holt said that the

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people of New Orleans were not yet satisfied that they had secured complete protection, but that they would soon make still further advances towards a thorough and efficient system of sanitary protection against both exotic and domestic pestilences. He insisted upon the absolute necessity of honest and truthful boards of health: these bodies should not be influenced in their decisions by commercial considerations. "Let the world beware," he cried, "of a board of health with commercial alliances in its line of policy. Such a board, with such a policy, is a board without truth!"

Dr. S. T. Armstrong, of the United States Marine Hospital Service, read a paper upon "Maritime Sanitation." The necessity of legislation enforcing the preliminary examination of seamen before shipping was pointed out, as well as the requirements as to cubic space in the sleeping-apartments of the crew.

Professor D. A. Sargent, of Massachusetts, read the report of the Committee on "School Hygiene." The great importance of proper physical training—such training as would develop all the muscles of the body equally—was forcibly dwelt upon. Young people should also be taught the elements of physiology, the necessity of cleanliness, of pure air in houses, etc. These things should not be taught in a perfunctory manner, but pupils should be shown how to apply practically the knowledge gained.

The Committee on Disposal of the Dead reported through the chairman, Dr. John Morris, of Baltimore. An interesting summary of the literature upon the subject during the past year was presented. It was stated that cremation had made great progress in Europe and this country during the year. In France, a bill to legalize the process has been introduced into the Chamber of Deputies. It is proposed to build a large crematorium near Paris. In Italy 396 bodies have been cremated during the year; in Germany, 186. The Spanish Cortes have passed a bill permitting cremation in Spain.

After urging objections to the present mode of disposal of the dead, Dr. Morris said, "If incineration were accepted, all these evils would be arrested. It is generally admitted that this process should be adopted in all great epidemics and after battles; but it would be wise to extend it to cases of zymotic diseases, such as cholera, smallpox, scarlet fever, and diphtheria. These poisons are preserved for years, and at certain times under certain conditions vent their destructive force on the human race."

In a brief discussion which followed the reading of the report, several members dissented from the conclusions arrived at by the committee. It was held that no satisfactory evidence had yet been presented that infectious diseases could be conveyed from cemeteries.

Among the other papers read during the meeting were "The Typhoid Fever Epidemic at Madison, Connecticut," by Dr. C. A. Lindsley, of New Haven; "The Cape Fear River as a Source of Water-Supply," by Dr. Thomas F. Wood, of Wilmington, North Carolina; and "Hygiene of the Dwelling," by G. E. Bell, C.E., of Newport, Rhode Island.

The Lamb prizes for the best essays on sanitary subjects submitted at last year's meeting were awarded as follows:

To Dr. George M. Sternberg, Major and Surgeon, U.S.A., a first prize of $500 for an essay on "Disinfection and Individual Prophylaxis against Infectious Diseases."

To Dr. Victor C. Vaughan, of Ann Arbor, Michigan, a prize of $200 for an essay on "Healthy Homes and Foods for the Working-Classes."

To Dr. David F. Lincoln, of Boston, Massachusetts, a prize of $200 for an essay on "The Sanitary Condition and Necessities of School-Houses and School Life."

To George H. Ireland, of Springfield, Massachusetts, a prize of $200 for an essay upon "The Preventable Causes of Disease, Injury, and Death in American Manufactories and Workshops, and the Best Means and Appliances for Preventing and Avoiding them."

Of the $2800 originally given by Mr. Lamb to be distributed as prizes, under regulations established by the Association, $1700 remain on hand, which sum is to be again offered for competition. In addition, Mr. Lamb, whose generous ardor seems to increase by what it feeds on, has decided to offer four additional prizes of $100, $75, $50, and $25 for plans of three classes of houses for the poor, to cost respectively $600, $1000, and $1500.

On motion of Dr. Billings, Mr. Lamb was elected a life-member of the Association by a rising vote.

The Conference of State Boards of Health, which has hitherto maintained a separate organization, will hereafter constitute a section of the Association, and meet at the same time and place.

Officers were elected as follows:

President, Dr. H. P. Walcott, of Massachusetts.

First Vice-President, Dr. C. W. Covernton, Province of Ontario, Canada; Second Vice-President, Dr. G. B. Thornton, of Memphis, Tennessee.

Treasurer, Dr. J. Berrien Lindsley, of Nashville, Tennessee.

President Cleveland was elected an honorary member of the Association.

After the adoption of several resolutions recommended by the Executive Committee, and the appointment of various special committees, the Association adjourned, to meet in Toronto, Canada, during the first week in October, 1886.

After the adjournment, the members and their friends were entertained by the local committee at an oyster roast, which proved a most enjoyable sequel to an interesting and instructive meeting. G. H. R.

BOSTON.

A POISONING CASE.

SOME excitement has been caused in this community by a wholesale case of poisoning in a house in the most fashionable portion of the city. The symptoms, which at first attacked all the occupants of the house save two young sons and a servant, were those of an irritant poison. A sauce-pan from which the lining had been worn away was at first suspected, and some potatoes which had been cooked therein were analyzed, with the discovery of copper, but in too small quantities, it was thought, to have caused the symptoms. At this time workmen in front of the house were melting tar, and the fumes were very disagreeable to the inmates. The persons who escaped had rooms at the back of the house, which fact led to the supposition that the tar might be the cause of the mischief. But the symptoms continuing, and including œdema of the eyelids, investigation was directed towards the materials used by the workmen to see if they contained arsenic. At this point a fresh and severer outbreak, affecting those previously exempt, recalled attention to the food, and it was found that the boys had eaten for supper of toast made of home-made bread. The boys had not before partaken of this bread. Suspicion was confirmed by the illness of a dog which was fed with bread and milk. The constituents used in the making of the bread were then examined, with the result of finding arsenic in large quantities in the flour-barrel. A few inches below the top of the barrel was a scoopful of a gray substance consisting of a mixture of arsenic and charcoal, probably the substance sold freely by grocers as "Rough on Rats." If this portion had been used in the bread, probably all who partook would have been killed. As it was, the length of time before the discovery of the poison caused serious illness of several members of the family. Even a tramp, who had received a piece of the bread, was found to have suffered. Just before the first occurrence of the poisoning a cook had been discharged from the house, and her place was filled the next day. Suspicion naturally fell upon this person, who might have had the motive of revenge, and she is now under arrest. But up to the present time the police have not discovered who sold the poison, nor have they any positive evidence against her. The statute of Massachusetts forbids any one, under a penalty of fifty dollars, selling arsenic, strychnine, corrosive sublimate, or prussic acid without a physician's prescription unless the seller records the transaction, with the name and amount of the drug, the date, and the name of the buyer. This law at present proves inoperative to prevent the sale of those poisons under the form of various proprietary vermifuges.

Within a few days an unusually distressing suicide of a promising young lawyer occurred in this city, the lethal agent being cyanide of potassium, which was contained in a labelled package with the instruction, "For cleaning coins."

ETHER IN NORMAL LABOR.

The closing meeting of the Obstetrical Section of the Suffolk District Medical Society for last season and the opening meeting for the present season were both largely occupied with an animated discussion on the subject of ether in normal labor. At the former meeting, following a paper in advocacy of the habitual use of ether, the prevalent opinion seemed to be adverse to its employment, except under some special circumstances which might warrant it. The chief objections were the danger to mother and child connected with the anæsthetic itself, the suspension of voluntary efforts by the mother, and chiefly the danger of uterine inertia and post-partum hemorrhage. The most strenuous opposition to these views was offered by Prof. J. P. Reynolds, of the Harvard Medical School, who insisted that the induction of only partial anæsthesia obviated the first two risks, and that as for flooding, that was due to uterine inertia, which, in turn, was due less to any other one thing than to nervous exhaustion. Therefore, he claimed, if the woman is wearied by suffering, relief through anæsthesia is the surest means of averting the danger of post-partum hemorrhage. He remarked that he was then awaiting a summons to a case of special anxiety, through the high social position of the woman, and the fact that she had in previous labors flowed to an alarming extent. Yet, in spite of what had been said of the dangers of post-partum relaxation from the use of anæsthetics, he should consider it his duty to employ ether in her accouchement, for the express purpose of averting this danger.

At the first meeting of the Section after the summer recess, Dr. Reynolds presented a summary of all the cases of midwifery he had had since the previous meeting, including the case above referred to and two others of similar character, when there was particular reason to fear flooding. These he considered would be test cases for the question of anæsthesia, and so treated them. In the whole series of cases ether had been given, usually to the extent merely of obtunding sensibility during the pains, but where forceps were applied, as in some of the cases, to complete anæsthesia. In none of the cases had there

been undue loss of blood or any other abnormality. He was therefore confirmed in his belief that it was the *duty* of every practitioner, on the score of humanity, to afford to all parturient women the relief which might be gained through the use of ether in labor. These remarks applied chiefly to the second stage of labor, as in the first stage he employed chloral and morphia for the same purpose.

A MALPRACTICE SUIT.

One of those unpleasant experiences which are a terror to hospital physicians has recently befallen Dr. Baker, the well-known gynæcologist of this city. A woman who had been the rounds of various hospitals was received into the Free Hospital for Women, of which Dr. Baker is the head. An operation was advised, and its nature, with the possibility of its failure, fully explained. She was even advised to consult her friends before deciding to have it performed. She does this, and repeats to many people what had been told her by the surgeon. From the severity of her suffering, she concludes to accept the operation, and sends for a clergyman, who administers the communion. The operation is performed, and is partially successful. She leaves the hospital, and even expresses her gratitude to the surgeon who has given her his services. The next chapter in the story is the bringing of a suit against the surgeon for ten thousand dollars damages, for having performed, against her consent and without her knowledge, an unjustifiable operation, which had left her crippled. Damages in twenty thousand dollars are also claimed against the hospital which has given her gratuitous board and care. She declared that she was enticed into the hospital on representation that she could there be cured; that she had no suspicion that an operation was contemplated until she overheard the nurses discussing it, and, on expressing her alarm, was assured that nothing would be done without her consent; that she soon after came to consciousness after an anæsthetic to find that she had been made the victim of an operation. She also claimed to have been ejected from the hospital at an inclement season, and at a late hour in the day. At the trial there was testimony from surgeons that she had consulted them beforehand about the operation, and had told them who was to perform it. This evidence was reinforced by that of other persons, including the clergyman. But the case resulted in a disagreement of the jury, and it is reported that ten of the number favored the claims of the plaintiff. It seems to be a dangerous thing, sometimes, to give your services to the suffering poor.

AN ETHICAL QUESTION

of some practical importance has been presented to the Boston physicians for individual solution. Not long ago a burglary occurred at night, which was discovered by a policeman, who arrested one of the burglars. An accomplice attempted the latter's rescue, but was beaten over the head with the watchman's club, which afterwards presented signs of sanguinary use. The case was reported by the policeman, who was confident that he had inflicted serious injury. The following day an order was issued that the patrolmen should call upon every physician in the city, to inquire if any one had on that day dressed scalp-wounds in a man answering to such a description, and, if so, to obtain information which might lead to his discovery. It was believed that the man must have called medical aid. A great many of the doctors who gave negative answers to the inquiry asked themselves the question whether they would be justified in exposing the criminal, supposing they had obtained knowledge of him through his seeking their professional services. There was a rather wide-spread feeling that the police authorities had adopted an unjustifiable mode of investigation for apprehending a man who, though a criminal and one whom all good citizens would wish to see brought to justice, had nevertheless, by coming as a patient, a right to protection from exposure by his professional attendant. If there is a "seal of the confessional," why not a seal of the consulting-room? At all events, the police inquiry was fruitless, which may mean that some physician took this view of the matter.

C. F. W.

Boston, December 2, 1885.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held December 3, 1885, A. Jacobi, M.D., President, in the chair.

A review of the life of Louis Elsberg, M.D., and of the advancement of our knowledge of diseases of the throat during his professional career, was read by Dr. M. H. Henry.

The scientific paper of the evening was read by Dr. Samuel W. Smith, and was entitled

ORIGINAL DEDUCTIONS DRAWN FROM A STUDY OF ONE HUNDRED CASES OF FRACTURE OF THE UPPER EXTREMITY, EXCLUDING THE HAND.

The cases observed had come under his care principally during the past four years at the Demilt Dispensary. Nearly one-half of the fractures had occurred in children under twelve years of age, and of these twenty-five were fractures of the clavicle, eight of the condyles of the humerus, and one of the lower end of the radius. Of the cases occurring in persons over twelve years of age,

twelve were fractures of the clavicle, three of the condyles of the humerus, and twenty-four of the lower end of the radius. The author described the nature of the fracture in these cases, which he thought had an important bearing upon the treatment, the principal points being with regard to location, and whether or not the fracture was transverse, short-oblique, or long-oblique. Speaking of fractures of the lower end of the radius, he confined his remarks to the so-called "Colles" fracture, and said he conceived an important difference to exist between this fracture and the short-oblique or transverse, for in the latter case the characteristic deformity of the Colles fracture did not present unless there were at the same time impaction of the upper fragment. But the text-books omitted to mention the peculiar obliquity of the Colles fracture. He said, "The kind of splint used, and the after-management of the case, should, therefore, depend largely upon the fact whether the obliquity of the fracture be long or short. In the former case we have the action of the supinator longus with the extensors constantly drawing the lower fragment upward, and its carpal end with the carpal bones backward and the hand outward, which gives rise to the posterior deformity and appearance of dislocation of the ulna: hence, as the obliquity is great, the difficulty of retaining the fragments in apposition after reduction is correspondingly great, and by the drawing upward of the lower fragment we have a shortening of the radius, giving rise to the unnatural convexity over the head of the ulna so common after treatment of these fractures. Dr. Moore, however, claims that the inner deformity over the head of the ulna is due to the giving way of the internal lateral ligament and the triangular fibro-cartilage, the styloid process and, sometimes, the head of the ulna being thrust through the annular ligament. This may or may not be the case, and is difficult of demonstration. Through the kindness of Dr. Dennis, I was shown a remarkable specimen of so-called Colles fracture, with dislocation of the ulna, the head of the bone tearing through the annular ligament. This specimen was taken from a woman who had thrown herself head foremost from a third-story window, striking upon her hands. The force of the blow was greater than is necessary to produce a Colles fracture: hence the driving of the head through the annular ligament and the comminution of the lower fragment of the radius."

In speaking of these fractures, he used the term Colles fracture only where the fracture was of the long-oblique variety and where it gave rise to the characteristic deformity as discovered by Mr. Colles; the words short-oblique or transverse being employed where the fracture occurs in the same location, but with deformity less marked, and, after the fragments had been brought into apposition, they are more easily held in their natural position.

There were upon his list twenty-five fractures of the lower end of the radius: of these, two occurred in children under twelve years of age, one being transverse and one a separation of the epiphysis with no deformity. Eleven cases were between the ages of twelve and fifty years: of these, eight were short-oblique or transverse, with some deformity, and three were instances of Colles fracture, in which the deformity was well marked; twelve occurred in patients over fifty years of age, and of these two were short-oblique or transverse, with considerable of the characteristic deformity of the Colles fracture, but easily reduced and readily held in position. The remaining ten were Colles fractures, the characteristic deformity being well marked in all of them.

The main object in the treatment of fracture of the clavicle, he believed, is to lift the shoulder upward, outward, and backward, and to hold the fragments in apposition, the dressings in common use being Desault's, Sayre's, and Moore's. In the use of Desault's splint for oblique fracture near the inner third of the clavicle, Dr. Smith had never been able to throw the shoulder sufficiently outward to overcome the deformity without seriously interfering with the circulation of the arm by pressure upon the axillary vessels. One great objection to Dr. Sayre's splint of adhesive plaster is that it irritates the skin and causes superficial ulceration. Dr. Moore's "figure-of-eight" dressing was a step in advance, but it answered the opposite of its intended purpose in oblique fracture near the inner third. This had led Dr. Smith to carry Dr. Moore's idea a step farther by making a clove-hitch with a scarf around the forearm, well up, near the bend of the elbow, passing the loose ends across the back and over the uninjured shoulder. This enabled him to draw the elbow of the injured side farther backward, inward, and upward, and to make the humerus a lever and the side of the chest a fulcrum by which he could lift the shoulder of the injured side upward, throw it outward, and draw it backward. He could thus completely overcome the action of the subclavius muscle, and also that of the sterno-cleido-mastoid by tension upon the pectoralis major, at the same time fixing the scapula and firmly holding the fragments in apposition, without at any time interfering with the local circulation.

With regard to fractures of the condyles of the humerus, a varied experience, full of disappointments, in the use of the known splints for the more severe fractures of the condyles, had set him to work to make a splint which should fulfil the following requisites: 1, to hold the fragments in apposition; 2, to lengthen or lessen the external lateral angle of the arm with fixation; 3, to leave the en-

tire elbow-joint exposed for local treatment during the whole time of wearing the splint without disturbing it.

The instrument which he had devised and now exhibited he described as being made of two rods of untempered steel, extending from the upper part of the arm to the wrist, with a ball-and-socket joint at the elbow and screws for fixation; the lower ends were passed into a sheath-screw upon each side of the wrist; the upper ends passed through two iron posts set in tin and made fast to the arm by plaster-of-Paris bandages, the rods being made firm in the posts by thumb-screws. On each side of the wrist was a post through which the sheath-screw passed and was made fast to the wrist in the same manner as the upper parts, and fastened with fixation-screws. By moving the sheath-screws, the lateral angle of the arm could be contracted or widened as needed, thus overcoming any tendency to loss of the carrying-point. A turn of the fixation-screws at the elbow and wrist would allow the forearm to be flexed, extended, pronated, supinated, and fixed at any desired point, without other interference with the splint.

Regarding passive motion, Dr. Smith thought the time for its commencement varied in different cases. While motion might be wisely commenced within a week from the injury in one case, in another it should not be begun for three or four weeks.

The topic of the treatment of Colles fracture remains for consideration in a future paper. He related some cases, however, and pointed out the danger of leaving a splint on for too long a time without observing the condition of the parts.

DISCUSSION.

Dr. JOSEPH D. BRYANT made some remarks on fracture of the clavicle, and said that he thought the deformity was due to the fact that the clavicle had ceased to serve its intended use,—namely, to hold the shoulder backward, upward, and outward. He did not think the subclavius muscle played any important part in the production of the deformity. Regarding the treatment, the indications were met by Dr. Sayre's apparatus, also by that of Dr. Moore, and also, so far as he was able to judge from casual observation, by the apparatus presented by Dr. Smith. Besides, the latter, of which he thought well, is free from certain objections which pertain to the other two.

Dr. A. C. POST thought the most important distinction to be made with regard to location of fractures of the clavicle was between those occurring in the natural divisions,—*i.e.*, those which occur at the inner side of the coraco-clavicular ligament, those which occur between the coronoid and trapezoid ligaments, and those which occur on the outer side of the trapezoid ligament. In the first situation fracture of the clavicle causes considerable deformity; as the rule, the clavicle is apparently shortened and the shoulder falls, the outer fragment being below the level of the inner fragment. In the second situation there is ordinarily but little deformity, and little treatment was required except rest and support by a sling. In the third situation there is, again, considerable deformity, but of an entirely different character from that accompanying fracture occurring on the inner side of the conoid ligament; in this the shoulder is thrown forward, and the short fragment connected with the acromion is placed at nearly a right angle with the long fragment, and is nearly on the same level; there is no falling.

Dr. A. H. GOELET had used a bandage similar to that employed by Dr. Smith, but made of roller bandage. In a case of fracture of the clavicle in which the adhesive plaster employed in Sayre's method of treatment had given rise to great discomfort, the change had given the patient complete comfort.

Dr. SMITH, in closing the discussion, said he had followed Hamilton's division of the clavicle into thirds. His cases had led him to believe that the subclavius muscle played an important part in the production of the deformity. Only one of his cases was in the outer third of the clavicle.

Dr. C. R. AGNEW offered the following resolution:

"*Resolved*, That it is the opinion of the Academy of Medicine that any judicial or other action which in its effect discourages members of the medical profession in making early reports to the Board of Health of cases of supposed contagious or infectious diseases is contrary to public policy and most detrimental to the interests of public health."

This was carried unanimously, and the Society adjourned.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held December 9, 1885, the President, JOHN A. WYETH, M.D., in the chair.

PERINEPHRITIC CYST OF BOTH KIDNEYS.

Dr. T. M. PRUDDEN made the report of the microscopical examination of specimens presented at the last meeting of the Society for a candidate by Dr. H. J. Boldt. The specimens, he said, were of unusual interest and represented a rare condition. One tumor filled nearly the entire right side of the abdominal cavity; a similar tumor occupied the left side, but was somewhat smaller. One contained a litre of gelatinous fluid; the other, three hundred cubic centimetres. They were perinephritic, and the kidneys were besprinkled with small cysts containing a simi-

lar fluid. The fluid in the larger cysts had evidently insinuated its way into the uriniferous tubules, and a part of these were distended to the extent of losing their distinct characters and forming little cysts. One side of the kidney, the side on which the cyst-sac was non-adherent, was smooth, and the renal structure showed marked chronic interstitial inflammation. In the vicinity of the small cysts were hæmatoidin crystals.

Dr. PRUDDEN also presented for a candidate a specimen of carcinoma of the stomach, liver, and omentum.

SARCOMA OF THE LIVER.

Dr. H. J. BOLDT presented a part of a liver which weighed nineteen and a half pounds, and which was the seat of sarcoma. It was of special interest with regard to the difficulty of diagnosis. Some of the physicians who saw the patient thought the condition was amyloid change in the liver, probably due to syphilis, of which disease there was an imperfect history. Dr. Boldt was at first of this opinion, but later changed his diagnosis to malignant disease of the liver. One eye had been enucleated by Dr. Knapp.

CYSTS OF BOTH KIDNEYS AND OF THE LIVER.

Dr. J. W. ROOSEVELT presented both kidneys and the liver, which were the seat of cystic degeneration, removed from the body of a man who entered Roosevelt Hospital July 6, 1883. He was 37 years of age, a laborer, a hard drinker. He had complained for a year of palpitation of the heart and of seeing muscæ volitantes. He had also suffered from headache, dyspnœa on exertion, and œdema. On admission, there was some dyspnœa, respirations 31; the urine was of low specific gravity, and contained five per cent. albumen. The liver and abdominal veins were enlarged. July 12, he became comatose after a severe attack of dyspnœa, and died. There were œdema and old adhesions of the lungs, and some other lesions, the most interesting of which were cysts of the liver, varying in size from that of a lemon down, and of the kidneys. Both kidneys were converted into masses of cysts. Dr. Roosevelt, in the short search which he had made, had been unable to collect more than four cases of the kind.

Dr. ROOSEVELT also presented the bladder and kidneys of a man who had died with symptoms of pyelitis. A stone had been detected in the bladder on admission to the hospital, a few hours before death. One kidney was converted into a small cyst; the other was enlarged,—the so-called surgical kidney. The walls of the bladder were much thickened, and in the viscus was a stone about the size of a walnut.

OSTEITIS OF THE FIBULA.

Dr. WACKERHAGEN presented the lower end of the fibula, the seat of necrosis, removed in the case of a girl, 13 years of age, who, in July, 1882, fell, producing a contusion of the right ankle. An abscess broke spontaneously. Some trouble in the ankle continued until the spring of 1885, when Dr. Wackerhagen exsected two and a half inches of the lower end of the fibula, which had undergone necrosis. The disease had encroached slightly upon the astragalus, which was scraped. The patient made a good recovery, and there were now, seven months after the operation, no signs of disease.

Dr. GIBNEY and the PRESIDENT spoke of the rarity of disease of the lower end of the fibula without involvement of the bones of the tarsus or of the tibia.

RENAL INFARCTIONS; ANTE-MORTEM HEART-CLOTS, ETC.

Dr. L. EMMET HOLT presented the heart and kidneys of a child which had died aged 17 months. It was delicate, and manifested more than the ordinary amount of cerebral irritation during the cutting of teeth. On the last occasion, ten days before death, the disturbance of the brain and nervous system was greater than usual. Drugs had little effect. Two days before death the temperature rose to 104°, the child became comatose, and three hours before death marked cyanosis developed. At the autopsy, the dura mater was apparently normal; there was slight milkiness of the pia; the vessels of the right hemisphere were markedly engorged; those on the left side were apparently anæmic; the same condition was observed in the interior of the brain and in the cerebellum. The cerebral arteries were examined to the second bifurcation, and no obstruction was found. In the left hemisphere the sinuses were occupied by firm decolorized thrombi. This condition was not present on the right side. The heart was apparently normal, but upon both sides were very hard, closely-adherent clots; that upon the right side completely filled the cavity. On the surface of the kidneys were a number of nodules, varying in size from a pea to the end of one's finger. The gross appearances were somewhat suggestive of malignant disease; but the microscopical examination showed white infarction in marked degree. There was commencing diffuse nephritis. Dr. Holt thought the heart-clots were ante-mortem. There was no clear explanation for the post-mortem conditions.

MULTIPLE MYOMA OF THE STOMACH AND BLADDER.

Dr. R. VAN SANTVOORD presented specimens removed from the body of a man 70 years of age, who entered the hospital about two days before death. He was suffering chiefly from dyspnœa. There was considerable fluid in both pleural cavities, and a loud

systolic murmur of uncertain origin. He died apparently from dyspnœa. The autopsy showed pleurisy and fibroid phthisis. The lesions of chief interest pathologically were in the stomach, rectum, and bladder. The stomach was eight inches long, and a saddle-shaped neoplasm, two and a half inches in length and breadth and about half an inch thick, occupied the lesser curvature: it was apparently situated in the muscular layer, and was composed of muscular tissue. The capsules of the liver and spleen and the mesenteries were thickened, and adhesions had formed among the abdominal organs. The liver and spleen were considerably diminished in size; the vessels of the kidneys were in an advanced stage of fibroid degeneration; the bladder contained a circular tumor one inch in diameter and one-fourth of an inch thick, presenting the appearance of a muscular growth; there was also a similar tumor in the wall of the rectum, which was adherent to the base of the bladder by an old process; the aorta was markedly calcareous; the cerebral vessels were very brittle.

THE PHYSICAL SIGNS OF PNEUMONIA.

Dr. VAN SANTVOORD also presented specimens removed from the body of a man who came into Randall's Island Hospital with the following history. On admission, his mental condition was fair, and he said that he had been sick seventeen or eighteen days with a fever and cough, but without expectoration. There was marked dulness over the upper lobe, with flatness over the lower lobe; auscultation revealed absence of respiratory murmur over the lower lobe, and amphoric breathing over the upper. The examination was made by Dr. E. A. Maxwell. On the following day the amphoric breathing had disappeared, and bronchial breathing had taken its place. Over the lower lobe flatness had also disappeared, and bronchial breathing had appeared where there was absence of respiratory murmur before. The urine contained albumen to the extent of one-eighth of its bulk, and there were epithelial and blood casts and free blood. On the last day of his life the patient had three epileptiform convulsions.

Autopsy.—The body was in a fair state of nutrition; the arachnoid was thickened as if by some chronic process, and under it was a quantity of a somewhat gelatinous lymph infiltrated with pus. This appearance covered the convex surface, and at the base extended into the spinal canal, especially on the posterior surface of the cord. The upper lobe of the right lung was in a condition of gray hepatization, and differed from that ordinarily observed in the fact that the consolidation extended very nearly to the anterior edge of the lung, which is free, as a rule, in pneumonia of the upper lobe. This fact was interesting in connection with the physical signs. Dr. Janeway had already called attention to the fact that in pneumonia affecting the upper lobe and extending nearly or completely to the anterior edge there might be not only amphoric respiration instead of bronchial, but also cracked-pot note, because the wedge of lung pressed firmly upon the bronchus and gave rise by pressure to the possibility of cracked-pot resonance on percussion. The left ventricle was considerably hypertrophied; the arteries showed atheromatous change; the kidneys contained a few cysts; one cyst at the upper extremity of one kidney was as large as a turkey's egg; the capsules stripped readily, and the kidney itself had considerable fat in the pelvis, and the process appeared to be one of chronic diffuse nephritis, with great predominance of parenchymatous change; the urine had shown that there was an acute interstitial nephritis, which was the fatal factor in the case. The other viscera presented no lesions of special importance.

CONGENITAL TUMORS OF THE ANTITRAGUS.

The PRESIDENT presented three small congenital tumors, probably composed of yellow fibroid cartilage, removed from in front of the tragus. The father and aunt had had similar tumors.

TUBERCULAR TESTIS.

The PRESIDENT also presented a testicle removed from a man 55 years of age, who had had hernia upon the left side for twenty-five years. About seven months ago the left testicle became enlarged and slightly painful. It gradually increased in size, and six weeks ago extended upward into the inguinal canal, becoming harder and more tender. The patient was more or less constipated, had slight abdominal pains, and pain was almost continuous just below Poupart's ligament. He had lately been treated for posterior spinal sclerosis. The family history was negative. On examination, Dr. Wyeth found a tumor as large as one's fist, evidently containing fluid and extending up the inguinal canal. The diagnosis was possible hydrocele or simple peri-orchitis; there were also indefinite symptoms of strangulated hernia. Operation revealed double cyst, one outside and the other inside the cord; the testicle was enlarged, and microscopical examination would probably show tuberculosis. It was referred to the Committee on Microscopy.

PHILADELPHIA NEUROLOGICAL SOCIETY.

A STATED meeting of the Society was held Monday evening, October 26, 1885, the Vice-President, Dr. CHARLES K. MILLS, in the chair.

Dr. HENRY M. WETHERILL, JR., read a paper entitled

HYOSCINE HYDROBROMATE.

The discussion on Dr. Wetherill's paper* was opened by Dr. D. D. RICHARDSON, who said it had been his experience to find that hyoscine caused dilatation of the pupils. In some cases the pupils remained dilated for a few days, but as a rule it disappeared sooner. The pulse was always much increased; with the exception of one case, it was always above 120. Respiration increased often to 40 per minute. He agreed with Dr. Wetherill as regards rise of temperature and increased respiration. The appetite is not influenced by the use of the drug. The secretions, he said, were generally increased, especially that of the kidneys. No constipation resulted from its use.

Dr. CHAPIN said he had been a daily observer of the experiments of Dr. Wetherill, and entirely concurred with his remarks. He said he had always found the pulse to be hurried. The sleep which resulted from its use has been from eight to ten hours. He thought the difference of opinion as to the physiological actions of the drug might be due to different preparations of it.

Dr. WETHERILL, in conclusion, said that the dryness of the throat was very decided. There was also a relaxation of the muscles of the throat.

The next paper read was entitled

THE PRINCIPLES GOVERNING THE CHOICE OF CURRENTS IN ELECTRO-THERAPEUTICS. BY G. BETTON MASSEY, M.D.

The reader pointed out the value of more accurate conceptions of the differences in the physical character of faradic and galvanic currents as a basis for their intelligent selection. The therapeutic value of faradism is due entirely to its electro-motive pressure, while the most useful medical quality of the galvanic current is its volume.

Electro-motive pressure and electric volume are essentially different articles of the materia medica, and should be so considered.

The therapeutics of "volt-pressure" applications were reviewed, including the differing indications for slow-succession and rapid-succession faradic currents, and were contrasted with the therapeutics of "milliampère-volume" applications.

The paper concluded with the statement that the faradic current presents the best form of electricity for the treatment of those diseases in which a stimulation of mobility or sensibility is either directly or indirectly curative, with the single exception of disorders characterized by the appearance of degenerative response, while the constant galvanic current may be relied upon to fulfil the remaining possibilities of electricity in medicine.

LEWIS BRINTON, M.D.,
Recorder.

* See page 237.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, DECEMBER 10, 1885.

The President, J. C. WILSON, M.D., in the chair.

DR. G. E. DE SCHWEINITZ presented a

TUMOR OF THE TESTICLE.

Eighteen months before the first evidences of enlargement of the testicle, the patient had contracted syphilis. This led to a diagnosis of syphilitic disease of the testicle; but the steady progress of the enlargement, in spite of specific treatment, soon compelled a change of diagnosis, with a consequent removal of the organ. One month after this removal the patient died, with recurrence in the abdomen. Microscopic examination of the growth showed a stroma of young spindle-cells, interspersed with variously-shaped collections of cells closely resembling cancer-cell nests. The seminiferous tubules are normal, and their cells are in active proliferation or have passed out into the surrounding tissue to help form the nests mentioned.

Dr. H. R. WHARTON presented a specimen from a case of

GELATINIFORM ARTHRITIS OF THE KNEE-JOINT.

The joint had been diseased for two years, and was excised by Dr. John Ashhurst, Jr. In addition to the usual signs of the disease, the specimen showed a circumscribed patch of caries in the external condyle of the femur.

Also, a larynx and trachea from a case of

MEMBRANOUS CROUP

in which tracheotomy had been performed. The patient, a girl, æt. 4 years, had had croup for some days, when increasing dyspnœa necessitated tracheotomy. After a period of relief, she died suddenly. Post-mortem examination showed a complete membranous cylindrical cast of the larynx and trachea, extending into the larger bronchi. There was also an ante-mortem heart-clot. The exhibitor remarked that the points of greatest interest to him were the great relief following the operation, although there was much membrane below the point of opening, showing that the dyspnœa was due to a certain extent to reflex laryngeal spasm; the extreme smallness of the trachea; the extensive deposit of membrane; and the fact that the tracheal tube might easily have been pushed between the membrane and the inner surface of the trachea.

Dr. CARL SEILER thought that in these cases of croup, as well as in cases of foreign body in the larynx, it was a reflex spasm, rather than the direct obstruction, that caused the dyspnœa. He had found that it is not

inspiration that is interfered with, but expiration. This would lead to the conclusion that the involvement is due to spasm. Now, if it is principally spasm, intubation of the larynx might in some cases supplant tracheotomy: it might at least be tried before tracheotomy is resorted to.

Dr. WHARTON thought that in movable foreign bodies it was the expiration that was most interfered with, while in an impacted foreign body or in an exudation it was the inspiration. This he had been accustomed to regard as a diagnostic point.

Dr. J. B. DEAVER presented a

CONGENITALLY-MISPLACED RIGHT KIDNEY,

taken from the body of a subject in the dissecting-room of the University of Pennsylvania. It was situated opposite the fourth lumbar vertebra, resting upon the aorta and common iliac arteries and veins. It derived its blood-supply from the aorta and common iliac by two arteries. The two veins emptied into the ascending vena cava and common iliac. The ureter sprang from the anterior surface and entered the bladder normally.

Dr. H. A. HARE presented a patient with an

ANOMALOUS HAND,

a negro, æt. 45 years, who had a supernumerary little finger on each hand. Each finger has a nail and is fairly well formed, but is apparently not connected with a metacarpal bone. He has nine children: the first, a boy, has six fingers on each hand; second and third, normal; fourth and fifth, girls, each six fingers on each hand; remaining children normal. He knows nothing of his parents.

Dr. WHARTON SINKLER had had a patient under his observation some years before who had a perfectly-formed and useful supernumerary third finger, which was, he thought, connected with a supernumerary metacarpal bone. He was one of four sons, three of whom had supernumerary fingers or toes, as also had his father and some of his paternal uncles. There were no deformed females in the family.

Dr. JAMES TYSON recalled two instances of this anomaly: the first in a colored boy, whose father presented the same condition; the second in an idiot, with no family history of heredity.

Dr. DE SCHWEINITZ mentioned a case in which this anomaly had passed through two generations. He also referred to a fœtus whose cystic degenerated kidneys he had presented to the Society, in which were present on each side six fingers and toes, in which dissection showed the supernumerary digits to be supplied with supernumerary metacarpal or tarsal bones.

The PRESIDENT had seen several cases of this anomaly in which the supernumerary digit was a mere dermal appendage, situated at the outer side of the hand, near the base of the little finger. Two of these instances had occurred in the same family.

Dr. B. A. RANDALL asked if supernumerary metacarpal or tarsal bones are often to be found in these cases,—a point rather neglected in the previous discussion.

Dr. WHARTON had seen a case in which there was a well-marked supernumerary metacarpal bone, in connection with a perfectly-developed supernumerary finger between the middle and ring fingers.

Dr. H. F. FORMAD had seen a case in which there was no corresponding metacarpal bone, while in the child's grandfather there was a well-developed supernumerary metacarpal bone. The intervening generation was normal.

Dr. W. E. HUGHES said that these, like all other anomalies, were very frequently hereditary, and, again like other anomalies, were much most common in the colored race. There were all varieties of them, from mere dermal appendages, such as are present in the case to-night, to perfect fingers attached to perfect supernumerary metacarpal bones. Between these were cases in which a perfect supernumerary finger was attached to a normal metacarpal bone by a joint separate from the joint of the normal finger. Very rarely there were supernumerary carpal or tarsal bones.

Dr. HARE said that metacarpal or tarsal bones were rare; that dermal appendages were quite common; and that bifid members occupied an intermediate position,

Dr. A. S. ROBERTS read notes on a case of

DEFORMITY OF THE FOREARM AND HAND,

with an unusual history of hereditary congenital deformity.

(To be continued.)

NEW REMEDIES AND CLINICAL NOTES.

TREATMENT OF HEMORRHOIDS.—In an inaugural thesis, Dr. Rosière discusses the treatment of hemorrhoids, and recommends forced dilatation of the sphincter ani as a means of avoiding pain and hemorrhage, except in cases with procidentia without contracture. As regards treatment by cauterization, which is in some cases more suitable, the method of Richet is to isolate the tumors and grasp them with his forceps, which combine crushing with the galvano-cautery. The base of the hemorrhoid is first tied with copper wire, and then the tumor removed with the pincers. The hemorrhoids disappear so quickly as to suggest the idea and name of volatilization. Operating in this way, Richet has treated one

hundred and sixty cases, without having to deplore a single death.—*Revue de Thérapeutique Méd.-Chir.*, No. 19.

Gangrene of Scrotum following Excision of Inguinal Glands.—Dr. W. B. Platt, of Baltimore, communicates to the *Medical News* the records of three cases of limited gangrene of the scrotum following removal of indurated inguinal glands. Within a few days after the operation on the lymphatic glands the bottom of the scrotum became red, swollen, and tender, and a slough shortly afterwards separated, the surface subsequently healing by granulation. The testicles were not exposed. This result occurred in one case in which the original operation was done with full antiseptic precautions. The lesion was regarded as an acute reflex gangrene from intense irritation of trophic nerves.

MISCELLANY.

The Value of a Corpse.—The question whether a dead body is property or not has been before the courts occasionally for adjudication, and has been decided almost always to the effect that it could not be considered as a subject of barter and sale. Some courts have held that there was absolutely no property in a dead body, although there might be in the shroud or coffin. Other courts have held that there was a quasi-ownership which would enable the next of kin to hold possession or remove the body under certain circumstances. The legality of the sale of a corpse for the purposes of dissection has been denied, and judgment refused for the alleged price. A question of this sort came recently before a court at Washington, although the outcome has not been published. It arose in a suit brought by a certain doctor against the demonstrator of anatomy of the medical department of the Georgetown College, to secure payment for a subject said to have been delivered to the college on the order of the demonstrator. The charge was fifteen dollars, which the claimant says was less than usual. Payment was refused, and he thereupon brought suit. The defence interposed was to the effect that the dead body was not property, and that it was stolen from a cemetery. It is said that the latter statement is not denied by the doctor, whose name was mentioned by some of the papers in connection with the stealing of the body of A. T. Stewart some years ago in New York. There seems to be little doubt of the decision of the suit, for the courts have expressly refused to help a creditor trying to enforce a claim of this kind. In addition to this, almost all the States have placed a heavy criminal punishment upon attempts to remove bodies from cemeteries for purposes of dissection.

Butter-Substitutes.—The oleomargarine question is a burning one at every meeting of dairymen, and as a health problem demands the attention of all persons desirous of preventing adulteration in food-products. Almost all of the States have more or less stringent laws on the subject of manufacture or sale, but it is difficult to enforce them. Oleomargarine is manufactured very extensively, and when composed of pure materials and combined in a cleanly manner cannot be said to be unhealthy; but the process of manufacture is not always satisfactory, and the product is almost invariably put on the market as pure butter. This fraud is one which the laws are always aimed at, but the practical difficulty of determining the imitation butter from the real has caused the sales to be immense. The only remedy was thought by the New York farmers to lie in absolute prohibition of all manufacture and sale, and such a law was placed on the statute-book some two years since. Unlike other prohibitory laws, it was vigorously enforced, and there was little oleomargarine either made or sold until the Court of Appeals in that State decided not long ago that the law was unconstitutional, and that a statute prohibiting a manufacture which, when properly carried on, did not produce an unhealthy article of food, was contrary to the spirit of our institutions. Right upon the heels of this decision the oleomargarine-manufactories opened up, and have been in full blast ever since. As a result, it is said that one establishment in New York City has placed upon the market during the past year two million pounds of the stuff, while one in Providence has manufactured one million seven hundred and fifty thousand, and one in Boston one million one hundred and fifty thousand.

The sale of oleomargarine interferes very seriously with that of genuine dairy-products, and the whole farming interest is becoming aroused on the subject. At the recent sessions of the National Butter, Cheese, and Eggs Convention in Chicago some appalling statistics were presented, and a lively discussion took place as to the best preventive measures to be adopted. One of the best suggestions was a demand that Congress pass a general law prohibiting the use of coloring-matter and the sale of oleomargarine for real butter. It is questionable, however, whether Congress will not say that the States must regulate the matter for themselves.

The Publication of the Medical Annals of the United States Navy.—At the regular monthly meeting of the Newport Medical Society held December 2, it was voted that "our associate member, Dr. Ayre, of the United States Navy, who is stationed at the Torpedo Station in this harbor, be requested to personally act with the Newport Medical Society in securing the publication of

the valuable 'Medical History of the United States Navy during the War of the Rebellion.'" A large portion of this material is ready for publication, but, owing to the want of Congressional appropriation, is not available for the use of the medical profession.

The very liberal aid afforded the Army Medical Department in publishing the Medical and Surgical History of the War of the Rebellion, and the acknowledged value of that great work, is sufficient excuse, if any be needed, for pressing the importance of an appropriation for publishing our naval medical and surgical history.

MEDICO-CHIRURGICAL COLLEGE, Philadelphia, December 1, 1885.—Section IV. of the Pennsylvania Registration Law of 1881 requires that diplomas from outside of the State must receive the endorsement of a recognized medical faculty within the State before registration; but, before giving such, the faculty must be satisfied as to the qualifications of the applicant. As the endorsement of a diploma is an acknowledgment of the qualifications of its holder as well as of its genuineness, the faculty of this College desires to announce that it will endorse no diploma for registration until the holder thereof passes a satisfactory medical examination. The fee for such examination is thirty dollars. P. D. KEYSER, Dean; W. F. WAUGH, Secretary.

LIABILITY FOR MISTAKES IN DISPENSING.—The courts have been called upon more than once to determine the liability of a druggist who puts up belladonna by mistake in a prescription calling for extract of dandelion. The latest instance occurred in Iowa, where the facts showed that the customer proceeded to help himself from the jar containing the drug which the apothecary was using to fill the prescription. The customer was injured by the dose he took, and brought suit against the apothecary for damages. The defence interposed was that the customer was a trespasser in helping himself, and could not hold the apothecary liable. This defence was brushed away by the court, which held that if the customer took the dose from the same jar used by the apothecary himself it was under the implied promise assumed by the law that he would pay for what he took, and that in this view he could not be held to be a trespasser. The apothecary was therefore held liable in damages for not knowing what drug he was compounding.

A TIMELY HINT.—The subscription-price of the PHILADELPHIA MEDICAL TIMES is only two dollars a year. *Verbum sap.*

NOTES AND QUERIES.

OBITUARY.

DR. ALBERT HOLMES SMITH died at his home in this city on the 14th instant, in the fifty-first year of his age. He was a native of Philadelphia, educated at the Friends' school at Westtown, and was a graduate of both the Department of Arts and that of Medicine in the University of Pennsylvania. In 1856, when he received his medical degree, he entered the Frankford Asylum as assistant-physician, and subsequently served as resident physician in the Pennsylvania Hospital. He for many years was connected with the Philadelphia Lying-In Charity, to which he was elected attending physician in 1862, and he held this position until one year ago, when the condition of his health was such as to preclude the idea of his being able to resume his active duties at this institution, in which he always took a very warm interest, and where he established his reputation as a successful teacher of midwifery. He also delivered each year a course of lectures upon nursing.

He was instrumental in forming the Philadelphia Obstetrical Society, and was its President from 1874 to 1876. He was also one of the original members of the American Gynæcological Society, and served as its President at its meeting in Chicago in 1884. His contributions to medical literature were, almost without exception, discussions of practical questions in connection with the department of medicine in which he was particularly interested; though not numerous, they gave evidence of original observation, good judgment, and familiarity with the current literature of his branch. He invented several instruments; but that with which his name is best known was an important modification of the Hodge pessary.

In the long months of sickness, from malignant disease of the bladder, his affliction was borne patiently and uncomplainingly, but, when the end came, it was welcomed as a release from suffering which had become intolerable.

Dr. Smith was the type of a Christian physician: he could have no higher eulogy. Modest, cultured, conscientious, and possessing innate refinement, his life was a perpetual rebuke to the impudent self-seeking and greed for gain which are fast assuming prominence in the professional life of the day.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 6, 1885, *TO DECEMBER* 19, 1885.

CAPTAIN WILLIAM J. WILSON, ASSISTANT-SURGEON.—Ordered for duty as Post-Surgeon, Plattsburg Barracks, New York.

CAPTAIN D. M. APPEL, ASSISTANT-SURGEON.—Ordered for duty at Jackson Barracks, Louisiana.

FIRST-LIEUTENANT H. P. BIRMINGHAM, ASSISTANT-SURGEON.—Ordered for duty at Camp Grant, Riverside Park, New York City.

FIRST-LIEUTENANT GEORGE E. BUSHNELL, ASSISTANT-SURGEON.—Ordered for duty as Post-Surgeon, Fort Preble, Maine.
S. O. 256, Department of the East, December 4, 1885.

FIRST-LIEUTENANT EDWARD EVERTS, ASSISTANT-SURGEON.—Ordered from Department of Columbia to Department of Arizona. S. O. 279, A. G. O., December 5, 1885.

FIRST-LIEUTENANT A. S. POLHEMUS, ASSISTANT-SURGEON.—Relieved from duty at Presidio of San Francisco, California, and ordered for duty as Post-Surgeon at Fort Halleck, Nevada, relieving Acting Assistant-Surgeon Loren N. Clark, U.S.A. S. O. 113, Department of California, November 30, 1885.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM DECEMBER 6, 1885, *TO DECEMBER* 19, 1885.

PASSED ASSISTANT-SURGEON GEORGE C. LIPPINCOTT.—Detached from Navy-Yard, Washington, and wait orders.

PASSED ASSISTANT-SURGEON C. W. DEANE.—Ordered to the U.S. Receiving-Ship "Dale," as relief of Passed Assistant-Surgeon G. P. Lumsden.

PASSED ASSISTANT-SURGEON G. P. LUMSDEN.—Ordered to Naval Hospital, Washington.

PASSED ASSISTANT-SURGEON P. A. LOVERING.—Detached from U.S. Receiving-Ship "Wabash," and wait orders.

PHILADELPHIA, JANUARY 9, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE ON CHRONIC INTERSTITIAL NEPHRITIS.

Delivered at the Philadelphia Hospital

BY JAMES TYSON, M.D.,

Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, one of the Physicians to the Hospital, etc.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN, — The patient whom you see was admitted to the hospital three months ago. He is 39 years of age, a house-painter by occupation, and during the past fifteen years has had three attacks of lead-colic, the last occurring about two years ago. He has also had other manifestations of lead-poisoning. Four months ago he had a sharp attack of pain in the lumbar region, with vomiting and cramps. The severe symptoms lasted about a week, and then disappeared, leaving some lumbar pain. On admission he had diarrhœa, which was soon checked. Examination of the urine at this time showed that the specific gravity was 1014, and that it contained albumen and small granular and hyaline tube-casts. It was also learned that he had to get up at night six or eight times to pass water. The urine was sometimes pale and at times cloudy. There was slight swelling of the feet. Under the use of iodide of potassium improvement followed.

The fact that a person has had lead-poisoning should always suggest an examination of the urine, for lead-poisoning is one of the recognized causes of contracted kidney. There was in this case a little swelling of the feet, which also directed our attention to the kidneys. You will, however, notice the absence of all other symptoms pointing to renal disease. It is true that he complained of pain, but it will be noted that this pain was of a peculiar kind,—a kind which, when affecting the localities referred to, is almost invariably dependent on lead-poisoning. He had lumbar as well as abdominal pain, with vomiting, lasting about a week, and followed by diarrhœa. Again let me repeat what I have said on other occasions, that chronic Bright's disease of any form is rarely attended with pain, and that pain is not often a symptom of acute Bright's disease. This is contrary to the popular notion, but still it is the fact. More than three-fourths of the cases of "pain in the back" are nothing but lumbago.

Here is the urine. It is pale in color and of low specific gravity, and the quantity is undoubtedly increased. As we have heard, the patient has to get up at night to pass water, and this is one of the characteristic signs of contracted kidney, the presence or absence of which should be promptly determined by inquiry. You will note that testing for albumen by boiling and the subsequent addition of nitric acid gives a faint opalescence. The sediment is very scanty, and includes hyaline and pale granular casts. The swelling of the feet has entirely disappeared, and he feels quite well.

Let me call your attention especially to the small amount of albumen present in the urine. This is another of the most characteristic symptoms of this disease, and there may be even less than in this instance. It is important to remember, in this connection, that the amount of albumen in these cases may at times be so small as to be detected only by the most delicate tests, and sometimes not at all. In no other form of Bright's disease can it be said that albumen is ever altogether absent.

What has been said of albumen is also true of tube-casts in chronically contracted kidney. The sediment is always small, and may contain pale hyaline and granular casts, and these may even be absent at times. On the other hand, casts and albumen both are often overlooked, from want of care in the examination. The casts are always of the hyaline and pale granular variety. It is true that such casts are found in other forms of Bright's disease, and therefore cannot be relied on solely in making the diagnosis; but, when taken in connection with the small albuminuria and the increased quantity of urine, their presence indicates with considerable certainty the existence of chronically contracted kidney.

In these cases the dropsy is small in amount, and in some cases there is no dropsy whatever. It is owing to this absence of dropsy and other marked symptoms that these cases are so often

overlooked. Often the first evidence that the patient is affected with interstitial nephritis is the occurrence of uræmic convulsions. The patient may have previously been in poor health, complaining of nausea, fulness of the head, palpitation of the heart, and uneasiness, but the true cause is not suspected until convulsions set in; and often under such circumstances these end the scene. At the same time, this is by no means invariable; and I now recall a case in which recovery was considered impossible, whereas the patient is to-day journeying to California in tolerably fair health.

Although the symptoms of chronically contracted kidney are often not characteristic at the beginning, yet certain signs present themselves sooner or later. One of the most important of these is hypertrophy of the heart and of the muscular coat of the arteries. Why does this hyperplasia occur? The most rational explanation, although purely theoretical, is this: that in this form of Bright's disease the blood becomes charged with urea and other substances which are effete and poisonous, and it would seem that the arterioles attempt to resist the approach of the urea-charged blood to the tissues by contracting their muscular coat. The heart, feeling this resistance, contracts more powerfully, and the arterioles under this increased force react in turn. In consequence of this action and reaction, hypertrophy results. One of the consequences of this condition of the vascular system is high vascular tension. If the sphygmograph is applied to the radial artery, there will be, instead of the regular up-and-down movement, a prolongation of the systolic factor of the tracing. This is a tolerably constant symptom. Although not pathognomonic, yet it is an exceedingly important symptom to study, and the sphygmograph has here as practical an application as in any form of disease. If this explanation be the correct one in all instances, then it must happen that all forms of Bright's disease which last long enough should, sooner or later, be accompanied by hypertrophy of the heart. This is, however, not the case. I have seen cases of diffuse nephritis extending over many years, during which hypertrophy remained absent. In others, however, it does occur.

Let us now try to determine whether or not any of these symptoms are present in this case. First, as to high tension. This can often be recognized without recourse to the sphygmograph; but where the increase is small an instrument of precision is required. I should say that here there is a slight increase, but it is so slight that I could not assert it without the aid of the sphygmograph.

I shall next examine for hypertrophy, and what often accompanies it, palpitation of the heart. Our patient complains of the latter symptom. We find the apex-beat displaced a little to the left, and the area of cardiac percussion-dulness slightly increased. There is, therefore, evidence of a slight degree of hypertrophy associated with the symptoms of increased tension of the arterial system, as well as palpitation.

Another symptom which is also characteristic is headache and an unpleasant sense of fulness in the head. Our patient has experienced both of these symptoms.

Gastric derangements, especially a morning nausea without actual emesis, are common in this form of Bright's disease, and form a very annoying set of symptoms, persisting day after day. Such symptoms, when obstinate, should always suggest the examination of the urine.

Such patients are also very subject to inflammations of the serous membranes, and it is well to examine frequently, for pleurisy often develops latently.

Dropsy in the early stages of interstitial nephritis is not common, and often remains absent to the very end. More frequently, however, dropsy sets in towards the close of the disease, generally first appearing in the feet.

Owing to the absence of symptoms calling attention to the kidneys, and the presence of others easily explainable in other ways, this form of Bright's disease is frequently overlooked, while, on the other hand, it is the form which is least amenable to positive curative treatment.

The causes of chronically contracted kidney are often as difficult to discover as is the recognition of the disease itself. At the same time, there are well-determined causes, and there is none better demonstrated than lead-poisoning. Another cause, which is more common in England than in this country, is gout. Given a case of well-established gout, and one may be certain that he is also the subject of what is known in England as a gouty kidney,—in other words, a contracted kidney.

Another cause is alcohol, although probably not as frequently as has been alleged. It is the continuous use of alcohol, rather than the intermittent use of even larger quantities, which produces this effect. Still another cause is constant irritation of the genito-urinary passages, such as results from an impacted calculus; and more than once have I known gonorrhœa extend to the bladder and thence to the kidneys and produce interstitial nephritis. Beyond these causes it is impossible to speak with definiteness. It has been asserted that the disease may be produced by anxiety, business cares, and mental disturbances of other kinds.

What is the anatomy of such a kidney as this man is supposed to have? Here are some specimens which exhibit the condition in a striking manner. You see that this kidney is contracted, that it is smaller than natural. It does not weigh more than three or four ounces, while the normal organ weighs from five to seven. Observe the unevenness of the surface, even before the capsule is removed, and when I strip it off the substance of the kidney comes with it. This is characteristic. A closer examination will show an unevenness of the surface, which presents almost a granular appearance; and this is another characteristic. This unevenness varies in different cases. Here it is marked. These granulations, instead of being small, as in the specimen presented, may be larger, often as large as a pin's head, or even that of the head of a nail, whence a kidney of this kind has been called a "hob-nailed kidney." It is also termed the gouty kidney, and, from its appearance, the "red granular kidney," in distinction from the contracted kidney, representing the last stage of chronic parenchymatous nephritis, which is white or yellow. When the kidney is opened, it is seen that the cortex has almost entirely disappeared. It is not more than one-fourth of an inch in thickness. Microscopical examination shows over-growth of connective tissue, and the contraction of this connective tissue has caused compression and destruction of the uriniferous tubules; and in places fragments of tubules with blind ends, and not communicating with other tubules, will be found. This destruction continues until a large part of the secreting substance is destroyed. The proliferated connective tissue undergoes contraction, squeezing and destroying the tubules, just as in interstitial hepatitis the hyperplastic connective tissue contracts and destroys the secreting substance of the liver. It is on account of this analogy that the term cirrhotic has also been applied to a kidney in this condition.

Next as to treatment. In this form of Bright's disease direct curative treatment is scarcely possible. At the same time, patients thus affected may be placed under such conditions that their lives may be prolonged indefinitely. Dietetic measures are more important than medicinal, and of dietetic treatment a modified milk-diet is the best. I do not say that this will cure any case, or that it is the best treatment in every case; but I say, speaking generally, the patient is more likely, under it, to escape the symptoms which cause annoyance and threaten his life than under any other. At the same time, there are often many reasons why this cannot be adopted. It is not necessary that the milk should be exclusive, and I generally permit bread and butter and weak tea. Coffee is not advisable, for its tendency is too much to lock up the wastes of the economy. If the milk-treatment be not adopted, the diet should consist of such food as contains the least amount of albuminous animal constituents, especially red meats. The white meat of poultry, fish and oysters, may be used in preference to the red meat and blood. The objection to meat is that it produces a large amount of urea, and the kidneys are so damaged that they cannot remove it from the blood. Eggs are objectionable for a like reason.

The hygienic measures to be recommended include proper warm clothing, the avoidance of exposure to cold and wet, and care to avoid sudden checking of the perspiration.

There are certain remedies which should not be used. I am satisfied from my own experience that iron is a bad remedy to be used in this form of Bright's disease. In this affection the secretions should be free, the bowels should not be bound, and it is desirable to have rather a poor blood than to have a rich blood. The use of iron tends to increase the fulness of the blood-vessels of the head and predisposes to apoplexy.

Cold bathing should also be avoided, for this drives the blood to the internal organs and increases the risk of rupture of

a blood-vessel. Sea-bathing is dangerous in all forms of Bright's disease, but particularly so in chronic interstitial nephritis.

ORIGINAL COMMUNICATIONS.

PHOSPHORUS-NECROSIS OF THE JAWS.

Read before the American Surgical Association at its meeting held April, 1885,

BY J. EWING MEARS, M.D.,

Professor of Anatomy and Clinical Surgery in the Pennsylvania College of Dental Surgery; Surgeon to St. Mary's Hospital, Philadelphia, etc.

THE earliest observations made with regard to the occurrence of phosphorus-necrosis of the jaws were those of Lorinser, of Vienna, who published a paper upon the subject in 1845, recording cases which occurred as early as 1839; Heyfelder, of Erlangen, and Strohl, of Strasburg, shortly after reported cases and confirmed the observations made by Lorinser. In 1846, Dr. Wilks, of London, published a paper upon the subject in "Guy's Hospital Reports." In 1847 an exhaustive paper was published by Professors Von Bibra and Geist, of Nuremberg, which will be alluded to hereafter. In 1850, Mr. John Simon, F.R.S., delivered a clinical lecture at St. Thomas's Hospital, London, on "Diseases of the Lower Jaw produced by Phosphorus Fumes," illustrated by the report of two cases at that time in the hospital. Other cases were reported, by both English and Continental surgeons, between this period and 1865.

Soon after the report of the cases occurring in Germany, the attention of the authorities was attracted to the subject, and stringent regulations were made with regard to the adoption of preventive measures in the match-manufactories of that country. In 1863, Mr. Simon made a report to the Privy Council of England with regard to the prevention of the disease. His report contained the results of the careful investigations made by Dr. Bristowe upon the subject. In 1867, Mr. Christopher Heath, in the Jacksonian Prize Essay of the Royal College of Surgeons of England, gave a full account of what was known upon the subject up to that date. In this country, Dr. James R. Wood, of New York, was the first to give an account of the disease, accompanied by the history of a case in which he removed the entire inferior maxilla. Subsequently cases were reported in which the entire lower jaw or portions of it were removed by Drs. William Hunt and C. S. Boker, of Philadelphia, and one notable case by Dr. J. C. Hutchison, of Brooklyn, in which the entire upper jaw with the malar bone was excised.

The text-books on surgery contain more or less full accounts of the disease; those of Professors Gross and Agnew treat the subject at some length.

[The account of the process of manufacture of matches, and the description of the effects of the introduction of phosphorus into the system, are omitted here, from want of room.—ED.]

I have had the opportunity of examining a large number of employees in match-factories, and of studying the effects of phosphorus upon them. In sixteen cases I have treated the toxic effects of phosphorus as it appeared in different stages of development upon the system, and I have been interested in observing to what extent toxic symptoms could be traced and defined. Of these cases, the majority has been among those who are engaged in the packing-room, where the handling of the matches occurs; but one was a dipper, and four were cutters.

Of the symptoms described as giving evidence of physiological or toxicological effects, very few have been noted as prominent in the cases under my observation. Beyond instances of conjunctivitis and bronchial irritation, I have not been able to elicit definite information as to any marked effect upon the membrane of the general mucous tracts. Constipation, rather than diarrhœa, has been the condition which existed. Examination of both male and female employees has not revealed any history of aphrodisiac effects, and, in the latter, increase in the menstrual flow has not been noted to any extent. The most marked toxic symptom observed has been the occurrence of hemorrhagic transudations from the gums, and this symptom is frequently noted among the employees. Pain over the region of the liver, sick headache, nausea, and muscular debility are symptoms described by many, while well-defined icterus has not been observed in any case. I have been informed of three fatal cases, in which the immediate cause of death was phthisis,

occurring some time subsequent to operations for the relief of necrosis of the jaw.

It is evident, from the absence of symptoms of acute poisoning, that the invasion of the system by the poison is slow, establishing a chronic toxic condition which awaits some exciting cause to make itself manifest. Accepting as parts of the pathological processes, which follow toxic effects, disintegration of the red blood-corpuscles and fatty degeneration of the arterial walls, we find in the highly vascular periosteum a membrane most liable to exhibit the effects of these morbid changes. Owing to the weakened condition of the arterial walls consequent upon the state of fatty degeneration present, the vascular tension is wholly or in great part lost, and the tissue, while surcharged with blood, is in a state of innutrition, owing to the impoverished condition of the blood: so that I have observed in cases free hemorrhages taking place from gums blanched and apparently bloodless. This condition is most favorable for the development of inflammation, and this process follows promptly upon the appearance of the exciting cause.

In 1847, Professors Von Bibra and Geist, of Nuremberg, published a valuable monograph upon the subject of phosphorus-necrosis, containing a very complete and clear summary of all that had been written previously upon the subject, and also the results of their very careful investigations. The conclusions arrived at were, among others, that phosphorus was the poisonous agent, and that the effects were entirely local. These statements were regarded as proven by the experiments upon rabbits submitted to the influence of phosphorus vapor. In these animals the characteristic disease could only be produced, according to the report, after laceration of the periosteum of the jaw and exposure to the vapor. As the result of these experiments, the deduction was made that the agent acts only when it can come in direct contact with the periosteum, and that those employees in match-manufactories who are free from carious teeth can pursue the occupation with impunity. They suffer neither locally nor constitutionally. The vapor appears to be incapable of producing any general cachexia.

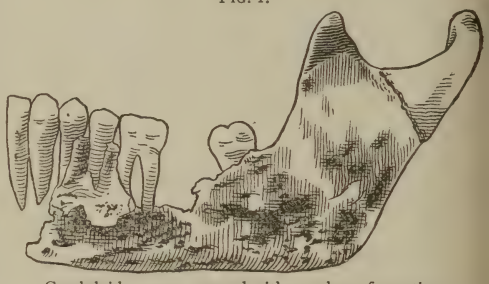
While the observations which I have made confirm, in general, the conclusions stated above, it is my belief that the statement made with regard to the local effects and the introduction of the poison through carious teeth should be received with some modification. I have examined a number of employees who have had carious teeth and were yet free from the disease and have continued to work in the factories exposed to the phosphorus vapors, also those who have had teeth extracted and have returned immediately to work in the factory and have not suffered from necrosis. A number who have suffered from the disease have given, as one of the symptoms which first attracted their attention and caused alarm, the sensation of a protrusion of a number of the sound teeth, or, as expressed by them, an elongation of their teeth. This condition would occur and then disappear, being the result apparently of an accession of cold. In one case the teeth, on two occasions, became quite loose and the gums much swollen and very sensitive. This condition of protrusion of the teeth from the alveoli indicated an inflammation of the peri-dental membrane, a structure which is continuous with the periosteum, and which lines the walls of the alveoli and surrounds the roots of the teeth. In all of the patients whom I have been able to examine in the early stages of the disease, I have found an accumulation of tartar around the necks of the teeth; in some this tartar has existed in large plates extending beneath the gum and covering the bodies of several teeth to the crown. This accumulation is a source of constant irritation, and, being lodged at the point at which the periosteum turns into the alveoli, gives rise readily to irritation of the peri-alveolar and peri-dental membrane. Assuming the correctness of the statement as to the pathological condition which the periosteum acquires as a result of a chronic toxic condition, we find in the carious tooth or in the accumulation of tartar a source of irritation which is competent under favorable conditions to develop inflammation. It is not my belief that the poison impresses the membrane primarily through the carious tooth, as stated by Professors Von Bibra and Geist, or the peri-dental membrane laid bare by the accumulation of tartar around the neck of the teeth which may have caused a recession of the mucous membrane and slight absorption of the alveolar process, but that these conditions, *per se*, under the influence of some exciting cause, as cold,

etc., light up in the periosteum, already in a morbid condition produced by constitutional impression of the poison, an inflammation which, if not arrested, results in necrosis. The pre-existing condition, it seems to me, is therefore a morbid state of the periosteum, which under an exciting cause readily inflames; often exciting causes are found in the teeth; a carious tooth, with the pulp exposed (which structure by some of its tissues is continuous with the peri-dental and peri-alveolar membrane), and with tartar accumulations, gives rise to an irritated and sensitive condition of the borders of the reflected periosteum. It is a matter of observation that the periostitis which develops in connection with other causes (with the exception possibly of syphilis and mercurial poisoning) is in many cases of a local character, whereas that which precedes phosphorus-necrosis is, as a rule, general, passing rapidly to involvement of the entire bone, unless interfered with. In this, as in some other respects, it resembles syphilitic periostitis. In the tertiary form of syphilis the periosteum of the jaws is very prone to inflame under the irritation of carious teeth or the violence inflicted in the efforts at extraction. In the cases of phosphorus-necrosis coming under my care, in the advanced stages of the disease, the uniform statement by the patient has been to the effect that, suffering pain in a carious tooth or in a sound tooth, a visit was made to the dentist and extraction was performed. In a day or two the jaw began to swell, and following that a discharge appeared from the point of extraction,—the history of the beginning of suppurative periostitis caused by the efforts at extraction. In some cases I have found portions of the teeth remaining and the alveolar process greatly broken. The results of the experiments obtained by Professors Von Bibra and Geist upon rabbits are not at variance with the views expressed above, since, according to the statements made, the animals in some instances were exposed for a period of time to the fumes of phosphorus before the periosteum was removed and the bone denuded, and it is quite reasonable to believe that, being easily impressed by the poison, a morbid condition of the periosteum had supervened, so that the laceration of the membrane was sufficient to excite the inflammation. In those animals in which the lower jaw was fractured, laying bare the roots of the molar teeth previous to the exposure to phosphorus vapor, there were evidences, on post-mortem examination, of serious constitutional as well as local effects.

The specific inflammation excited in the periosteum progresses rapidly, and results, in cases of the lower jaw, in the formation of laminated layers of new bone, which envelop the jaw, stopping at the borders of the alveolar process in front and behind, but completely surrounding the angle, ramus, and both processes.

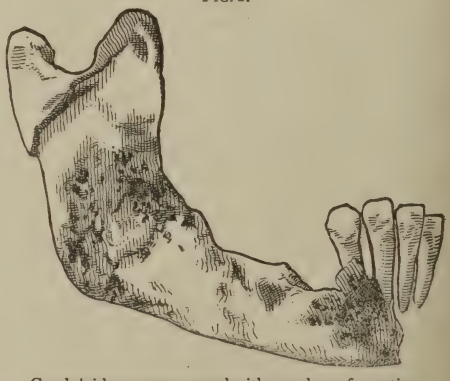
In a number of the specimens removed by me, the new bone formation had encroached upon the articulating surface of the condyloid process (Figs. 1 and 2), and

FIG. 1.



Condyloid process covered with new bone formation.

FIG. 2.



Condyloid process covered with new bone formation.

in one instance completely covered both condyloid and coronoid processes (Fig. 3). An interesting result has occurred in one case under my observation, in which the patient refused operative interference. The necrotic action had continued for six years, and the layers of new bone had united over the position of the alveolar border, thus entirely enclosing the sequestrum, which is

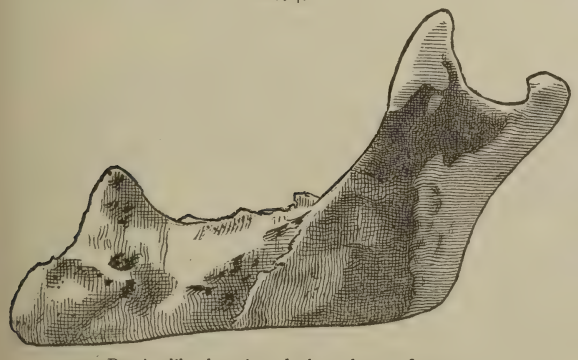
slowly disappearing, the discharge escaping externally by a sinus at the angle of the jaw. The muscles attach themselves to the periosteum covering the new bone, and are lifted off, as it were, with that membrane.

Fig. 3.

Condyloid and coronoid processes covered with new bone formation.

In some of the specimens in my collection portions of the new bone have exhibited the pumice-like appearance described as characteristic of this specific form of inflammation (Fig. 4). This appearance has also been observed upon the surface of the sequestrum. In other instances it has been absent, in this respect confirming the opinion which has been expressed that it is not present in every case, and therefore not pathognomonic.

Fig. 4.



Pumice-like deposit on body and part of ramus.

Professors Von Bibra and Geist have made careful examinations microscopically and chemically of the bone deposited by the periosteum in these cases. It is described as "lamellated, with large Haversian canals, not running *parallel* to the general direction of the bone, but placed at right angles; the lacunæ are rounded off. The proportions of organic and inorganic matter vary, the average being in eight specimens—organic matter, 32.4; inorganic, 6.76."

Mr. John Adams, in a clinical lecture published in the *Medical Times and Gazette*, July 5, 1852, states that these conditions are not observed in bone formed as the result of common inflammation.

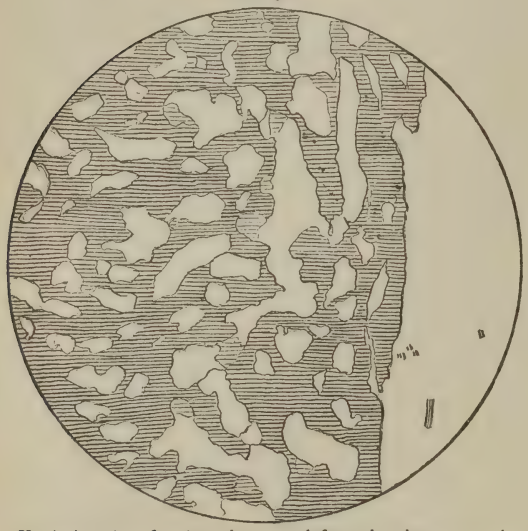
Mr. Thomas Smith, in the St. Bartholomew's Hospital Reports, vol. i., reports a case from which he removed the sequestrum of the entire lower jaw, the newly-formed jaw showing on microscopic examination "all degrees of development, from a finely fibro-nuclear matrix up to perfect bone. The bone differs from ordinary compact bone in being excessively vascular, the Haversian canals being very large, near together, freely anastomosing, and here and there in their walls presenting fusiform and pouch-like dilatations,—in fact resembling, in their outlines, veins slightly varicose. The bone is thickly studded with lacunæ, and these are peculiar in being very large in their cavities, less uniform in their general outline, and containing fewer canaliculi than is usual in well-formed bone. In the newest parts of the bone the lacunæ are merely irregularly-formed cavities without distinct canaliculi." These appearances correspond largely with those observed generally in new bone formations, and do not seem to me to be sufficiently distinctive to confine their description to formations occurring as the result of phosphorus-necrosis.

I append the report of Dr. Morris Longstreth upon a specimen of new bone formation taken from one of the cases under my care, and submitted to him for examination:

In the specimen of periosteal outgrowth from the case of phosphorus-necrosis of the lower jaw, two sets of sections have been made,—one vertically to the surface, including the entire thickness of the growth; the other horizontally. The sections (Figs. 5 and 6) show as their striking features the enormous size of the canalization system and the slenderness of the bone-trabeculæ. In the horizontal sections the canals appear of a greater diameter than in the vertical sections. The thickness of the bone-trabeculæ appears about the same in whatever direction

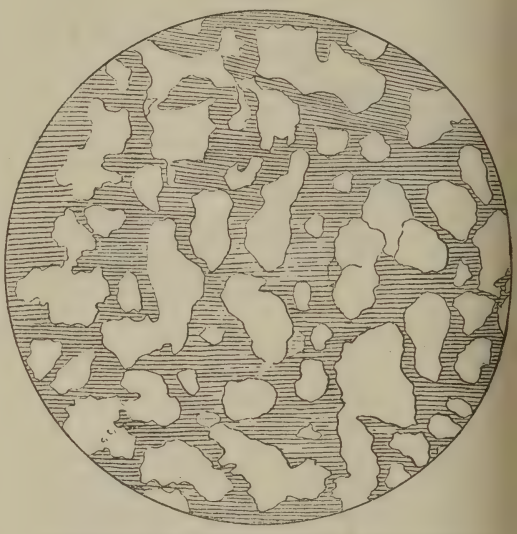
the tissue is cut. The inference to be drawn from this arrangement is that the canals, being connected with the vascular system either of the jaw-bone on the one hand, or on the other with that of the periosteum, have their extension chiefly in the vertical axis. This mode of distribution is evident from a naked-eye examination of the specimen, and is especially evident on its under surface; the upper surface is denser and more compact. It would give a wrong impression to assert that the canalization is wholly in the direction of the vertical axis. The ramification of the canals proceeds in every direction through the substance of the new formation of bone, as can be seen by the varying angles of obliquity at which the canals are found to be cut in the section. The new substance is rather like a sponge, in which the channels of the largest size are in general vertical, as is but natural, since the other channels with which they communicate

FIG. 5.



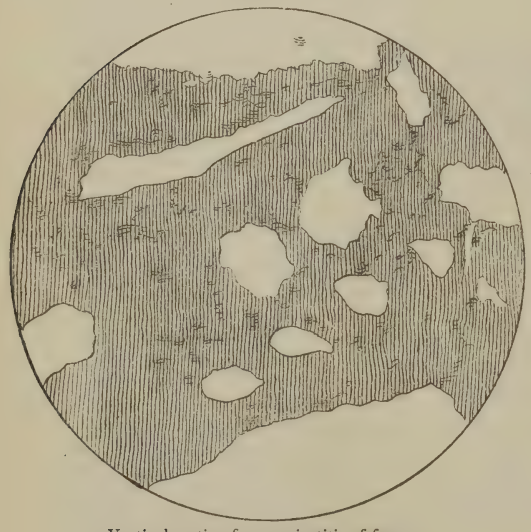
Vertical section of periosteal outgrowth from phosphorus-necrosis of jaw.*

FIG. 6.



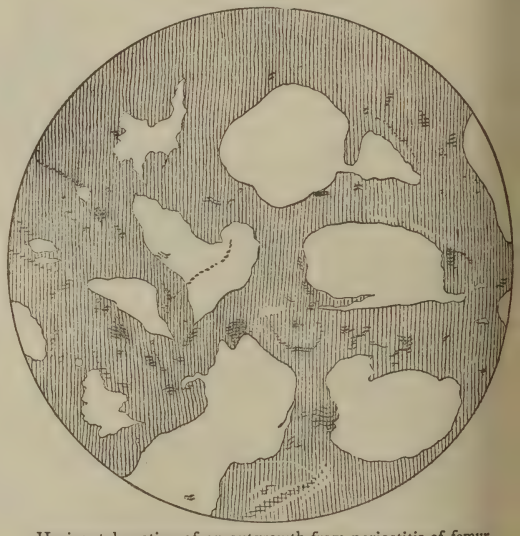
Horizontal section of periosteal outgrowth from phosphorus-necrosis of jaw.

FIG. 7.



Vertical section from periostitis of femur.

FIG. 8.



Horizontal section of an outgrowth from periostitis of femur.

* The wood-cuts are copied from photo-micrographs taken with a one-quarter-inch lens, natural size about 50 ×.

are seated in the directly subjacent jaw or the superimposed periosteum.

Compared with other periosteal outgrowths originating from other causes than phosphorus-necrosis, it will be seen that the same arrangement of canalization holds true as in this specimen. Here, in vertical and horizontal sections from a periosteal outgrowth from a femur (Figs. 7 and 8), the horizontal sections show larger-sized canals than the vertical sections, while the bone-trabeculæ in these two sets of sections (periostitis of femur) have about an equal thickness. The outgrowth from the femur shows about the same macroscopic appearance as that from phosphorus-necrosis, except that the former is much more dense. The latter may be cut with a knife, the former requires a saw for its division.

Compared with normal bone, the chief direction of the canalization system is found to be governed by the same principles in the normal as in the pathological growth. The law is that the canals pursue the same general course as the blood-supply most nearly contiguous to them. On or near the periosteal surface the canalization is more or less vertical, perhaps tending somewhat horizontally, inclined towards the distal extremity in the long bones. In the deeper layers of the compact tissue of the long bones the canals conform in their direction to the long axis of the bone. In flat bones the canals are almost wholly placed vertically in reference to the periosteal blood-supply. In the periosteal outgrowth the canalization system is found, therefore, to conform to the law governing normal tissue.

In respect to the cellular elements, bone-corpuscles, etc., found in this periosteal outgrowth from phosphorus-necrosis it is impossible to speak, since the specimen is a dried one from which the softer tissues have disappeared.

The lamination which is visible in the specimen, and which is of not uncommon occurrence in periosteal outgrowths, is much more apparent than real. A section made through the junction of the two laminæ, very distinct to the naked eye, does not show to microscopic vision any differentiation of tissue or any disturbance of the arrangement of the canalization system, which is apparently continuous through the two superimposed laminæ. The laminæ are to be regarded as marking the steps of the growth,—a temporary cessation of the formation of the periosteal deposit or outgrowth. The new lamina cannot be regarded as a *de facto* commencement of a new process, but merely as a continuation of the old morbid process, with a very short interval or halt.

With regard to the reproduction of bone after phosphorus-necrosis involving the upper jaw, the cases under my care have confirmed the experience of others who have had opportunities to observe similar cases. In no instance has there been more than a development of fibrous tissue after loss of substance. M. Ollier, of Lyons, records one case of phosphorus-necrosis of the upper jaw in which a certain amount of new bone was produced. He also quotes a case reported by Billroth of a similar character. Mr. Heath, in his work on the jaws, states as his opinion that these cases must be regarded as quite exceptional.

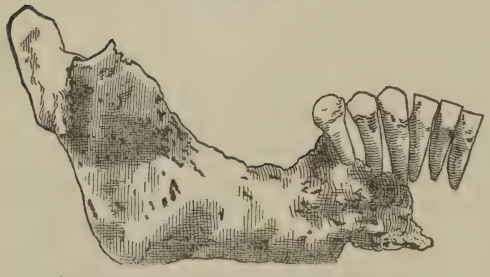
The permanent character of the new bone formation has been called into question by Mr. Salter, who states in his article in Holmes's Surgery, vol. iv., that the "repair of the lower jaw is but temporary; for, after a time,—often a considerable time,—the new bone diminishes by absorption to a mere arch." He has found this state of the bone in one case in which the lower jaw had been removed ten years, and asks as a question of theoretical interest and of practical importance how far this loss can be prevented by supplying it with a function through the means of artificial teeth. While more or less absorption does undoubtedly occur, it has been my observation that this condition is affected largely by the period of time in the deposit of the new bone at which, and the manner in which, the operation for removal of the sequestrum is performed. If removal of the sequestrum be delayed until well-formed plates of bone have been deposited, and care be taken in separating them from the sequestrum to avoid their fracture or dislocation, the absorption which naturally follows will not seriously impair the permanent character of the new-formed bone (Fig. 9). In one case in which I operated in 1881, removing two-thirds of the lower jaw, from the articulation on the right side to the first molar on the left, the new bone formation has not exhibited any marked decrease in size up to this period, and the patient has been able to wear with comfort and satisfaction an artificial denture for the past three years (Fig. 12). In another case, in which a large portion of the new bone deposit had been removed as a primary operation and with the intention of interfering in this manner with the progress of the disease, another layer of bone formed from the periosteal surface, which, however, lacked the density and firmness of

the lamellæ deposited originally; as a result, a greater degree of deformity occurred in the case than in others in which care was employed to remove the sequestrum without disturbing to any extent the new bone formation. Whether the adaptation of artificial dentures will in any degree diminish the tendency to absorption is to me a question: it would seem that the pressure exerted and friction produced by the movement of the denture upon the newly-formed and rather imperfect bone would develop absorptive action rather than diminish it. Notwithstanding, I always endeavor to have dentures adapted, in order to supply the loss so much felt by patients.

FIG. 9.

Appearance of patient after removal of right half of lower jaw; new bone well formed.

FIG. 10.



Sequestrum removed from patient shown in Fig. 9.

With regard to the relative frequency with which the upper and lower jaws are attacked, the cases under my care have shown a decided proportion in favor of the lower jaw. Out of sixteen cases, the lower jaw was involved in eleven, and the upper in five; in three both upper and lower jaws were attacked, the upper in a much less degree than the lower. This preponderance in favor of the lower jaw has been observed by the German and other authorities. Of fifty-two cases reported by the former, as stated by Mr. Heath, twenty-one were of the superior maxilla, twenty-five of the inferior, and five in which both were involved. Mr. Salter (Holmes's Surgery, vol. iv.) records five

FIG. 11.

Sequestrum representing two-thirds of lower jaw, right side. (From patient shown in Fig. 12.)

FIG. 12.

Appearance of patient with artificial denture after removal of two-thirds of lower jaw from right side.

cases under his care, in four of which the lower jaw was diseased, and the upper in one. In seventeen instances of which he obtained information, nine were connected with the superior and eight with the inferior maxilla. In Agnew's analysis of one hundred and eleven cases, fifty-eight were of the lower and forty-one of the upper, with twelve in which both were involved. From the information I have been able to obtain with regard to cases occurring in this country, the lower maxilla appears to have been attacked more frequently than the upper. These cases show, as in those under my care, that the upper jaw is not, as a rule, involved to the same extent as the lower,—the disease being limited rather to the alveolar border. This comparative immunity enjoyed by the superior maxilla is to be explained, it seems to me, by the difference in the configuration, the character of the structure, and the blood-supply of the two bones. The presence of the sinus within the body of the superior maxilla, lined by a membrane endowed with a good blood-supply, would enable the bone to resist the advance of the necrotic action. The absence of a large amount of cancellous tissue, as compared with the lower jaw, would also favor this immunity, although Mr. Heath is of the opinion that necrosis occurs less frequently in cancellous than in compact bone. Such has not been my observation in connection with necrosis of the lower jaw arising from various causes, since in many instances the dense compact base of the bone seemed, as it were, to afford a barrier to the advance of the disease.

The symptoms of phosphorus-necrosis differ from those of ordinary necrosis mainly in intensity. The pain, which is one of the earliest symptoms, is at first intermittent, but in time becomes continuous. It is also more diffuse from the first, involving the entire bone. The first and second stages are, as a rule, rapidly passed through, and suppurative periostitis manifests itself in the peri-alveolar and peri-dental membranes, causing the teeth to become loose and pus to exude from the alveoli. The inflammation quickly extends, involving the structures of the gums, and detaching them so as to expose the alveolar border. Infiltration of the tissues of the face follows, and swelling, which produces marked deformity, occurs. Soon the inflammation invades the entire periosteal layer, the formation of the laminated bone can be distinguished, and offensive discharges escape into the mouth; in the case of the lower jaw, the pus gravitates to the base and escapes by sinuses at this point (Fig. 13) or at some point

Fig. 13.

Necrosis of left half of lower jaw, with sinuses opening at the base.

lower down. In one case under my care the sinus had opened at the upper border of the clavicle before the patient presented herself to me for treatment. In some instances the pain continues during the suppurative action; as a rule, it is much diminished or disappears. When the inflammation involves the condyle of the lower jaw, great pain is experienced in the ear of the affected side, and occlusion of the jaws, which before may have been partial, now becomes complete. The interference with the ingestion of proper food, owing to the condition of the mouth; the suffering endured by the patient, associated with the constant presence in the mouth, and the swallowing, of the offensive discharges from the dead bone,—all combine to deteriorate in a marked degree the general health of the patient. Unless proper remedial measures are resorted to, death may ensue from exhaustion, or, in very severe cases, from gangrene of the overlying soft structures. In rare instances, such as the one alluded to in another part of this paper, the disease may assume a chronic form and the general health may be maintained during a period of years, while the sequestrum slowly dis-

integrates and the débris is carried off through sinuses.

The treatment may be divided into that of three stages: primary, intermediate, and secondary. The primary stage may be described as that in which the periosteum, in its morbid condition, manifests the results of beginning irritation. Unless alarmed by the occurrence of necrosis in a fellow-workman, the patient rarely presents himself for treatment in this stage. Pain in the bone of a diffused character—intermittent in occurrence, with the sensation of protrusion of the teeth—and soreness in the gums, with hemorrhagic transudations during mastication or upon the use of the tooth-pick, are the chief symptoms present in this stage. An examination may reveal one or more of the teeth in a carious condition; around the necks of the diseased as well as of the sound teeth a collection of tartar extending some distance beneath the gums and displacing the soft tissues; a softened condition of these structures, with a discoloration of a purplish hue. In this stage the treatment relates to the condition of the teeth, which should be conducted with the utmost care in order to avoid the production of periostitis, and the administration of remedies which are antidotal in character. Those teeth which are too much diseased to be saved by treatment should be extracted, especial care being taken to avoid fracture of the tooth or of the process. Collections of tartar should be thoroughly and carefully removed, the instrument being carried well up under the gums to remove any that may be lodged in this position. The carious teeth should receive careful treatment, so as to relieve the sensitive condition which exists and to avoid by gentle manipulation the development of peri-dental inflammation. Temporary fillings should be inserted until such time as it may be prudent to employ those of more permanent character. The soft structures should be bathed with detergent and astringent lotions, as phenol sodique, alcohol, tincture of myrrh, etc., in dilute solutions.

The constitutional treatment should consist in the administration of anodyne remedies, to relieve pain and soothe the general system, and of that agent which is regarded as possessed of the power to neutralize the effects of the poison and arrest the disease. Dr. Letheby, in his work on "Chemistry of the Poisons," recorded his observations upon the power of the vapor of turpentine to neutralize that of phosphorus. Andant, quoted by Bartholow, was the first to report cases in which the antidotal properties of turpentine were observed; and Personne, by experimental demonstration, confirmed the observation of Andant. The latter further inferred that, "as turpentine destroyed the luminosity in the dark and arrested the escape of the vapor of phosphorus, it acted similarly as an antidote in preventing the combustion of phosphorus in the blood and the consequent consumption of the oxygen." Höhler and Schimpf (Bartholow) showed by experiment that the commercial oil of turpentine (that which had been exposed for some time to the air and was therefore rich in ozone) was the only variety efficient as an antidote; that this form prevented fatty degeneration of the tissues; and that while under its influence no free phosphorus could be found in the animals experimented on.

In the cases which have come under my care, five have presented themselves in the first stage of the disease, and in these I have been enabled to employ the plan of treatment outlined above. In two, treated some three years since, the disease was arrested in the primary stage. At present I have three patients under this plan, and in these there are positive evidences of improvement.

In the stage which I have designated as the intermediate, in which the inflammation of the periosteum is well established, the plan of treatment should be such as to arrest, if possible, the inflammatory action, and thus limit the destruction of bone. Active antiphlogistic measures are here indicated; free incisions of the periosteum, the knife being carried to the bone, should be employed, and the use of such internal remedies as will assist in combating the condition of inflammation. According to my experience, the efforts to arrest the progress of the disease in this stage are, as a rule, without much avail: the specific character of the inflammation, so far as relates to its cause, and the rapidity with which it becomes general, seem to resist any successful interference. Measures should always be adopted, however, with the hope of at least limiting the subsequent necrosis.

When the inflammation has passed to

the suppurative stage and the death of the bone is accomplished, the treatment should consist in that which is supportive and expectant. Warm water should be freely used to cleanse the mouth, after which very dilute solutions of carbolic acid, iodine, or permanganate of potassium should be thrown upon and around the exposed bone with a syringe, so as to disinfect the parts and remove the collections of pus. A layer of seven-and-one-half-per-cent. iodoform gauze should be packed around the exposed bone so as to receive the secretions and prevent as far as possible their escape into the mouth and mixture with the food. If sinuses have formed, they should be cleansed by injections of medicated solutions as advised for the mouth, and a mass of iodoform gauze and cotton should be placed over the openings and held in position by a bandage. Poultices and warm fomentations should not be applied to the face, as they increase the suppurative action and invite the flow of pus to the surface, resulting in the formation of sinuses and consequent disfigurement. Nothing should be done to interfere with the bone-reproduction. No efforts at removal of the sequestrum should be made until the necrotic action is completed and the reproduced bone is sufficiently firm to preserve the shape of the original bone. In three of my earlier cases I endeavored to arrest the progress of the disease by cutting away the exposed process and scraping off the periosteum with the layers of new-formed bone. In no instance was the operation successful in stopping the disease, and the deformity which followed the subsequent removal of the complete sequestrum was greater than in cases in which this plan of treatment was not attempted.

The sequestrum should be removed through the mouth, care being taken to separate the laminæ of new bone entirely, so that they will not be fractured or drawn away with the sequestrum. When the disease has invaded the condyloid and coronoid processes of the lower jaw, the disarticulation is easily effected after incision of the structures in front of the ramus. In some instances it may be necessary to divide the ligaments of the articulation with the probe-pointed bistoury. When the entire lower jaw is involved, I have found it desirable, in order to preserve the contour of the parts, to remove but one-half at a time. After the expiration of eight or ten weeks, the remaining portion may be removed. (Figs. 14, 15.)

Fig. 14.

Sequestrum representing entire lower jaw. Right half removed ten weeks subsequent to removal of left half.

Fig. 15.

Appearance of patient after removal of the entire lower jaw.

After the removal of the sequestrum, the cavity between the two layers of new bone should be cleansed and packed with seven-and-one-half-per-cent. iodoform gauze; at each dressing the quantity used should be lessened, in order to permit of the approximation and consolidation of the bone-plates. For some time after removal of the sequestrum in the lower jaw, a bandage should be applied so as to support the new bone. After removal of the sequestrum in the upper jaw, the same form of dressing should be used until the

cavity is closed by the fibrous tissue which forms, as a rule, in place of the bone.

During the period of suppuration, the strength of the patient is to be maintained by the administration of preparations of iron and quinine, concentrated food, and well-regulated exercise in the open air. Care should be taken to avoid exposure to cold, and the hygienic surroundings should be carefully attended to.

The prevention of the disease is to be accomplished by the joint efforts of employers and employees. The introduction into the manufactories of systems of ventilation which will promptly remove the phosphorus fumes and as well the smoke from burning matches, will contribute materially to prevent the occurrence of the disease. While this may be accomplished successfully so far as relates to certain parts of the works, there are practical difficulties in the way of securing it in those rooms in which the matches are handled and constantly igniting, owing to the great danger which would arise from serious conflagrations if currents of air sufficient to remove the fumes and smoke were introduced. Efforts should, however, be made until some safe method is devised to accomplish this. In one factory with which I am familiar, exhaust-fans have been arranged so as to remove the fumes promptly from over the dipping-machines. Since the introduction of this plan, the employees working at these machines have been free from disease. Experience has proved the value of turpentine in neutralizing the toxic effects of the phosphorus fumes; and, as in the factories in England and on the continent of Europe, the employees in this country should protect themselves by wearing open, wide-mouthed bottles containing this agent, suspended by straps around the neck so that they should rest upon the anterior surface of the chest, affording in this way ready inhalation of the vapor. At various points in these rooms, protected from fire, large shallow vessels containing turpentine should be placed, in order that its vapor may come in contact with that of the phosphorus and neutralize it. The substitution of amorphous phosphorus, which does not fume, for the common phosphorus in the manufacture of matches has been recommended. The chief objections to its use are the cost, which is stated to be double that of the common phosphorus, and its want of ready fusibility. The safety match, which is being gradually introduced into use, is stated to contain no phosphorus. The chemically-charged paper attached to the boxes is said to contain amorphous phosphorus, and the manufacture, therefore, of this form of match should be free from danger.

On the part of employees, immunity from danger can be secured by the use of turpentine (as suggested above), frequent inspection of the teeth, and cleanliness. Inspections of the teeth should be made frequently, all accumulations of tartar should be removed, and carious teeth carefully extracted or treated and filled. During the treatment of the teeth or immediately after extractions the patient should not engage in work in the factory. Careful washing of the hands before taking food should be insisted upon and enforced by those in authority, and if it is necessary that the noon meal should be eaten in the factory, a special room should be provided for this purpose separate from the others.

I feel quite confident, from the investigations made by me in connection with the cases which have been under my care, that it is possible, by the adoption of proper methods of ventilation in the factories and the enforcement of proper regulations relating to the employment of antidotal agents and strict attention to cleanliness, to prevent the occurrence of the disease. It affords me pleasure to state that the largest manufacturing establishment in this country, The Diamond Match Company, which exercises the most liberal care of those attacked with the disease, is also keenly alive to the importance of securing its prevention by all available means.

I desire, in conclusion, to submit the following propositions:

1. That the disease is a local expression of the constitutional condition produced by the inhalation of the vapor of phosphorus, and by particles of the agent taken into the system with food by operatives in match-factories who do not give proper attention to cleanliness of the hands.

2. That the introduction of the agent into the system is, as a rule, very gradual, and in such small quantities as to avoid the production of symptoms of acute poisoning; that in this way the chronic toxic condition of the system is induced, characterized chiefly by disintegration of

the red blood-corpuscles and fatty degeneration of the arterial coats.

3. That the toxic condition precedes the jaw-disease, as is shown by the fact that the disease does not attack operatives recently exposed to the action of the agent, but those who have been exposed for a period of years.

4. That examination of the teeth of operatives has shown that many who have caries, and have returned to work immediately after the extraction of teeth, have enjoyed immunity from the disease, showing that the agent had not attacked the periosteal tissue thus exposed. This was further shown by the fact that in one of the cases necrosis did not appear until three months after labor in the factory had ceased.

5. That individuals vary in their susceptibility to the action of the poison. For this reason many suffer immediately with acute symptoms, such as nausea, vomiting, etc., and are compelled to abandon work in the factories.

6. That the conditions under which experiments have been made on animals, to prove the absence of the disease until exposure of the periosteum and perialveolar tissue was effected, are not similar to those to which operatives in match-factories are subjected.

7. That treatment of the disease in the primary stage is efficient and prevents its progress.

8. That the antidotal powers of turpentine have been established.

9. That the disease is to be prevented among operatives by the adoption of thorough methods of ventilation, stringent rules with regard to cleanliness, and the free disengagement of the vapor of turpentine in all the apartments of factories in which the fumes of phosphorus escape.

THE PENNSYLVANIA HOSPITAL AS A TRAINING-SCHOOL FOR PHYSICIANS.*

BY HENRY H. SMITH, M.D.,
Philadelphia.

WHEN the happy thought of our friend Richard Cadbury, the able steward of this hospital, led in June last to a social gathering of those who had served or were serving the institution as resident physicians, it brought together not only the few who dated back nearly half a century, but also many of those of a more recent period.

At this meeting, the pleasure excited by the renewal of old associations was very apparent, whilst the varied anecdotes and "inedited legends" of the house showed that the course of the Pennsylvania Hospital in the relief of the sick and destitute continued onward.

The acquaintances then renewed or formed between the residents of various periods proved that the bond of union was the pride each one took in the institution he had served in his youthful days, all admitting the professional benefits derived from this his former field of service.

At this gathering pleasant memories were revived by speakers representing the various decades of the service of the residents then present, and sad reminiscences followed the mention of such as were removed from our circle by the hand of death.

After enjoying "the flow of soul" of our excellent host of that evening, in aqua pura frigida, it was resolved that "the feast of reason" should be inaugurated by creating an organization that, meeting annually, would preserve the fraternal ties of professional interest made evident by so large an assembly, and indicate the value of the Pennsylvania Hospital as a training-school of physicians.

Having been recently requested by our executive committee to read on this occasion "a paper on any subject that might suggest itself," I have cheerfully assented to their wish.

Permit me, then, briefly to allude to a few of the important results gained by our profession and the public from the development of this hospital as a clinical school. As this can be best demonstrated by reference to some points of practice that originated in its wards, I shall allude to a few with which I am familiar either by study or personal observation, leaving to others of those present the pleasant duty of anecdotical reminiscences of their experience as residents of this hospital.

That the wards of this hospital have largely contributed to the relief of thousands is well known everywhere, but their special utility as an educational means has not been so distinctly alluded to from the

* Read at the first annual meeting of the Association of Resident Physicians of the Pennsylvania Hospital, December 17, 1885.

stand-point of those who resided in the house.

As the resident physicians of each term gained much of their practical skill from the experience and precepts of the attending physicians and surgeons, I propose, in illustration of this point, to rapidly enumerate a few well-known subjects which, starting in the practice of the hospital, were subsequently developed for the benefit of the health and lives of many families throughout our country, by residents who subsequently became their medical advisers.

To specify a few of these, prominently brought to the knowledge of the profession by such men as Physick, Hartshorne, Parrish, Hewson, Harris, Barton, Randolph, and others of a more recent day, is all that time will now admit,—such as the paper of Physick on "The Use of Animal Ligatures," published in the *Eclectic Repertory** in 1816, in which he proved, by experiment, that ligatures of buckskin, parchment, and catgut were readily dissolved, but that catgut was the most enduring: so its recommendation by recent gynæcologists is nothing new. Hartshorne's, Parrish's, and Hewson's experiments on the best means of arresting hemorrhage were likewise performed in connection with this institution.

The invention of Parrish's needle for ligating deep-seated arteries, that was so useful as to be afterwards claimed in New York, was another item; and Physick's cure, in 1802, of John Hius's false joint in the humerus, by introducing a seton between the ends of the bone, not only instructed those who saw the case, but the bone, which is yet in the Wistar & Horner Museum,† continues to enlighten generation after generation of medical students by showing the increased nutrition in bone thus excited.

Barton's operation for the relief of an anchylosed hip-joint, and that of wiring a fractured patella in 1834, were performed in our surgical wards, and the latter is now being revived in practice after lying dormant so many years, although the unfortunate result of his case has not always followed. In this house Randolph made his reputation in lithotripsy in the patients he so brilliantly cured in 1837 to '39.

Nor was the instruction of the hospital limited to its surgical wards. At an early period (1803) Benjamin Rush drew much of the knowledge he so widely disseminated in his lectures and "Medical Inquiries" from its patients; and it should not be forgotten, when Pasteur is now directing attention to the prevention and cure of hydrophobia, that Rush detailed an autopsy of a case of hydrophobia, and urged the adoption of Physick's proposed operation of tracheotomy or laryngotomy to obviate the effects of the spasm of the glottis that causes death in this dreadful disorder.‡ To Dr. Rush has also been assigned the suggestion of the cure of intermittent fever by pills made of cobweb,—the secretion of the spider known as the *Araneæ tela*,—a remedy which is said to have been originally prescribed by Dioscorides in the second century for the same purpose. As history repeats itself, this remedy has been recently (1885) revived by Dr. MacDonald, of New York City, for the same disorder; he recommending a tincture formed by macerating for forty-eight hours a bunch of cobweb of the size of a large walnut in f℥iv of whiskey, and then filtering. Of this a teaspoonful is to be taken every hour for four hours before the expected chill, etc.

Another item connected with the practice of a former day may be recalled in the fact that here Otto, with his rough pharmacy, in Parrish's cider and horse-radish mixture, cured dropsy, or relieved rheumatism with guaiacum and the decoction of the woods, as promptly and effectually as by propylamine, salicylic acid, or any of the more finished prescriptions of the present day; and it was likewise in these medical wards, as is well known to many, that B. H. Coates, Gerhard, Stewardson, and Wood pointed out at various periods, in post-mortem demonstrations, the changes created by disease in fevers and affections of the chest and abdomen.

It is, however, to the results of the labors of our former residents, rather than to those of the staff, that I now desire to direct attention.

The resident physicians of this house, in the early days now alluded to, had special opportunities for gaining knowledge. During the years prior to 1850, *this* was the main hospital of our city. The Almshouse, which until 1834 was on Spruce

* Vol. vi. p. 389.
† University of Pennsylvania.

‡ Medical Repository, vol. i. p. 105, 1804.

Street, between Tenth and Eleventh, only presented the student with chronic cases of disease in worn-out systems, and did not usually receive recent accidents, nearly all of which, if happening within twenty-four hours' travel of this city, were brought to the Pennsylvania Hospital; and I can recall one 1st day of May when seven severe cases of fracture were received on that day. At this period there were but two resident physicians in the house, each of whom served two years, and alternately took charge for six months of about two hundred insane cases, the male and female medical wards, as well as the obstetrical ward at the "Picture-House," on Spruce Street, each case of labor being attended in turn by each resident; or of both male and female surgical wards, where not unfrequently there were eighty beds to be dressed each day. The attending physician, surgeon, and obstetrician then only visited the wards on Wednesday and Saturday, as a general rule, unless in the judgment of the resident the case was so serious as to demand an immediate or more frequent consultation. The care of the insane alone was a heavy duty; and when the house suffered from the frightful mortality that attended two severe epidemics of puerperal fever, and which, strange to say, were always attended by a severe epidemic of erysipelas in the surgical wards, one being on Spruce Street and the other on Pine, notwithstanding all precautions taken in non-intercourse of attendants, it may readily be seen that the office of a resident physician was no sinecure. Twenty years' experience in private practice could not furnish such opportunities as then existed for a resident physician to gain a varied knowledge of his profession and to acquire habits of industry and self-reliance in emergencies, that never afterwards deserted him.

Prior to 1840 the insane patients occupied the portion of this building usually designated as the "West End," where Captain Poirier, in excellent French, instructed every one in the "Code Napoléon" and its application to all who unjustly restrained him of his liberty; and it was in the care of these patients that a resident in 1834–35, though specially interested in surgery, laid the foundation of that knowledge of insanity that, after 1840, as physician-in-chief of the department of this institution in Blockley, made him so widely known as an alienist that the public usually designated the Department of the Pennsylvania Hospital for the Care of the Insane as "Kirkbride's Institution."

In thus rapidly alluding to former medical officers of this hospital, it must not be supposed that I fail to recognize the beacon-lights of the profession now existing in its present staff. Time has not yet ripened their harvest, which, when gathered by some future historian, will doubtless exhibit its own heavy crop of brilliant thoughts and acts.

Nor is it wished invidiously to compare the present duties and labors of our residents with those of a former period. On the contrary, if any good is to be derived from this reference to the past practice of the house, it should be drawn from the fact that it exhibits the wonderful opportunities for gaining a sound practical education, offered then (as now in a modified form) to all who were fortunate enough to receive the appointment of resident physician in so large and varied a hospital, and should impress each one with the responsibility that rests upon him to make good use of his faculties for study from nature at the bedside, remembering that idleness or neglect of duty is not only a wrong to those whose lives may hereafter be intrusted to his care, but is also a wrong to his professional brethren, by depriving them of facts which it is his place to collect and publish. The professional reputation of more than one now prominent physician commenced in the report of cases and comments thereon, made in his early medical life while a resident of this hospital.

A peculiarity in the education of the residents, furnished by this house, that is daily becoming more apparent, is seen in the wide sphere presented for observation and study. The growth of specialties and the limitation of medical attendance on separate organs, as if the human body were not an entity, with each part dependent on the proper action of its fellow-organ, is, it may be feared, not likely to augment the class usually known as general practitioners, or the highly educated and accomplished physician of extended and varied experience, who recognizes the human frame as a compound organism formed of parts mutually connected by vital affinity.

Such practitioners as the "family doctor," a class much underrated by conceited specialists, met nearly all the medi-

cal wants of a family, whether in attendance on the mother in her confinement, or the father with an injured limb or a hernia, or the children in the diseases of childhood. These men became familiar with and readily recognized the physical peculiarities or idiosyncrasies of each member of a family, and, not unfrequently, after years of faithful service, gave their professional skill for the relief of those children's children. When under extraordinary circumstances further assistance might be demanded, as in delicate operations requiring peculiar manual dexterity, the family physician has now the opportunity of gaining it by consultation with those connected with special hospitals, a class that did not generally exist fifty years since. One great advantage to be derived from a medical residence in the Pennsylvania Hospital is to be found in the fact that it *is* a *general* hospital, and has no specialties, and that the mind of the youthful resident physician is liberalized and enlarged by studying *every* variety of disease or injury, and nearly *every* possible suggestion of varied treatment eliminated by the active brains and extended experience of the attending physician or surgeon.

Reference has just been made to the fact that much of the subsequent reputation and advancement in practice of those who have been the resident physicians in this hospital originated from their observation and reports of the curious and instructive cases presented in its wards. Among numerous marked examples of this, I cite the labors of Gerhard and Stewardson, two former residents, who pointed out the difference between typhoid and typhus, or of yellow and remittent fevers. Until within a little over fifty years, typhoid fever was *not* recognized in the United States, and it was not until Gerhard, profiting by the instruction of Louis and Chomel in Paris, returned to Philadelphia and became a resident physician in this house, that beginning a series of observations here, and conducting them subsequently in the Blockley Almshouse (which he published in the *American Journal of the Medical Sciences** and the *Philadelphia Medical Examiner* in 1835 to 1839†), our profession recognized and judiciously treated this formidable fever. In referring to this fact in his extended treatise on the practice of medicine, the late Professor George B. Wood states‡ "that the profession is much indebted to Dr. Gerhard for the means of accurately diagnosing typhoid from typhus fever; this being the result of his careful post-mortem examinations, and no less careful observations during life, furnishing a positive proof of an essential difference between the two diseases which Louis himself had previously been disposed to consider identical;" and these differences were subsequently confirmed by other observers. Another resident, F. W. Sargent, showed§ the occasional existence of the "taches rouges" or rose-colored spots in typhus fever all over the body, but mingled with its characteristic petechiæ.

Stewardson, in studying forty-three cases of remittent fever in this house from 1838 to 1841, showed‖ the diagnostic signs of remittent and pernicious intermittent from typhoid; Gerhard having previously claimed that *our* typhoid is not identical with that described by Louis, and that "he had a sufficient number of observations to prove that it is entirely distinct from the autumnal fevers of this country." In 1842 Dr. Reynell Coates, a resident of 1819–1823, now living, reported¶ Barton's bran dressing for compound fractures of the leg,—a dressing not as yet surpassed for such cases by any modern appliance to keep out microbes. Whilst Gerhard was occupied in the medical wards, Kirkbride was engaged and reported in the same journal in 1835** numerous cases of varied interest in the surgical and obstetrical wards, as strangulated congenital inguinal hernia cured by Barton, by making the testis adhere to and fill up the inguinal canal; tardy union in a fracture, cured by friction of the ends of the broken bone; the absorption of the callus from too early exercise after the fracture; injury of the abdomen creating peritonitis; case of rupture of liver and kidney; puerperal phlebitis; temporary loss of vision cured by leeches and a blister to the temple; luxation of a humerus reduced by the application of pulleys for thirty minutes and

* American Journal of the Medical Sciences, No. xxx., p. 320, 1835.
† Philadelphia Medical Examiner, 1838.

‡ Practice of Medicine, vol. i. p. 356, 1852.
§ American Journal of the Medical Sciences, vol. xiv., N. S., p. 532.
‖ American Journal of the Medical Sciences, vol. iii, N. S., p. 277, 1841, 1842.
¶ American Journal of the Medical Sciences, vol. iii., N. S., p. 515, 1842.
** American Journal of the Medical Sciences, vol. iii. p. 342.

free venesection. There was no anæsthetic then, and I have often seen the pulleys thus used and made fast to posts which stood for many years in the rotunda, these being kept there only for use in the reduction of dislocations. Another case he reported was a gunshot wound of the thorax, that was bled f℥xxx, and took one-eighth of a grain of tartarized antimony every hour; was bled on the second day f℥xxx, cupped freely, and purged with salts and tartar emetic; bled on the third day f℥xx, and lived until the seventh day, when the autopsy showed pleurisy and the wad of the pistol and some particles of clothing embedded in the substance of the lung, the irritation of which could not be removed even by such bleedings. I will only mention two other important acts of residents, viz., the suggestion in 1827 by George Fox, then a resident, of his bandage for the treatment of fractured clavicle,*—a dressing that was the only one used for many years,—and the statistical table of Joshua M. Wallace† of all the fractures admitted into this house from 1751 to 1800, which labor he performed in addition to his duty as a resident.

I will not longer tax your patience and keep you from the bright remarks to be made by others who are present, by further details of the varied labors and industry of the residents of this distant period. Most of them have gone to their rest, but the influence of their good deeds remains for the benefit of their successors. Suffice it now to say that I have made but a partial enumeration of the clinical advances made by attending officers and residents and again disseminated throughout the world through the varied classes of pupils that followed them in the rotunda of this house. Here Gerhard so taught auscultation and percussion as made many an excellent auscultator. Here Barton made surgical dressings with a neatness and picturesque effect that induced one young resident to make such constant practice and study as subsequently led to his efforts as a teacher of Minor Surgery and Bandaging, and caused it to become a subject of didactic instruction in every medical college in this country. The young graduate no longer enters the wards of a hospital, as he did, to be mortified at finding that an old surgical nurse can apply a bandage, make a poultice, or introduce a catheter with greater facility and more practical skill than is possessed by him, who holds a diploma creating him a doctor, or learned man. Prior to the year 1855 no such instruction was furnished in any of our colleges. *Now* it is taught everywhere, and there has been recently established in New York City a professorship of this important part of a young surgeon's education.

The credit of establishing this useful instruction may, I distinctly state, be justly assigned to the ideas first received in this house, and subsequently developed under the stimulus of the artistic dressings of a surgeon of the Pennsylvania Hospital, who created for himself a lasting professional monument in the suggestion of the beautiful and judicious dressing for fracture of the jaws known as "Barton's Bandage."

Such, gentlemen, are a few of the reminiscences of a former resident of the Pennsylvania Hospital, that present evidence of its value as a clinical school.

Perhaps some of you will be disposed to regard these recollections as those of an old fogy; but, if so, please remember that he will be extremely gratified to learn that there are those among the residents of the present time who can surpass by talent and industry the labors of those to whom he has alluded,—men who were instructed in their professional duties and sentiments by such teachers as Barton, Randolph, Norris, and Wood; not to overlook such distinguished obstetricians as Hugh L. Hodge and Charles D. Meigs, who often cured neuralgia of the ovaries without spaying the patient.

* Philadelphia Medical Examiner, p. 108, 1838.
† Philadelphia Medical Examiner, p. 108, 1838.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF D. HAYES AGNEW, M.D., LL.D.,

Professor of Surgery in the University of Pennsylvania, etc.

(Reported by CHARLES BAUM, M.D.)

PAINFUL MUSCULAR SPASM TREATED BY EXCISION OF PORTION OF THE NERVE-TRUNK.

GENTLEMEN,—Some of you will recognize this patient as the man from whom a portion of the right spinal accessory nerve was excised, towards the close of my lecture one week ago, for a nervous affection, the history of which is briefly

as follows. About one year ago he began to experience lateral twitching of the head, with choreic movements of the muscles of the right side of the neck, the sterno-cleido-mastoid and the trapezius being principally involved. This was accompanied by pain, which gradually increased in intensity so that frequent injections of morphine, hypodermically, had been required for relief. For a short time he was in the medical ward of this hospital, under the treatment of Professor H. C. Wood. His head was drawn to the right side. Frequent spasmodic rotary motions of the head occurred, and the pain became almost unendurable. Even slight pressure along the right sterno-cleido-mastoid muscle developed several points of exquisite tenderness and provoked the movements of the head. Being guided by the results of pressure, and not by the position of the head, an incision was made along the posterior border of the right sterno-cleido-mastoid muscle, beginning a little below the tip of the mastoid process of the temporal bone and extending about two and a half inches. After dividing the superficial structures, the posterior border of the muscle was observed: this muscle was then turned towards the median line of the neck, thus exposing the spinal accessory nerve, which principally supplies the sterno-cleido-mastoid and trapezius muscles, and from it about one-half inch of its trunk was excised.

Immediately after the operation all pain and movements ceased, and the patient slept well without an anodyne. Thus far only one twitch of momentary duration has recurred. At present pressure does not produce pain or motion.

In regard to prognosis, I may say if the irritation has been peripheral the result will be permanent; if central in its origin, the symptoms will return when the nerve-extremities unite. Much may also be accomplished by judicious general treatment.

MORBID GROWTH REMOVED FROM THE BLADDER.

The next patient for operation has been sent to the hospital from Washington, District of Columbia, by my friend Dr. Yarrow.

For fifteen years this middle-aged man has been annoyed by frequent micturition, pain in the back and bladder, and for one year by bloody urine. At times the blood has been mixed with the urine, and again at other times has appeared only at the close of micturition. Rest in bed and appropriate treatment have always afforded considerable relief, but any exercise would increase both the pain and flow of blood. Gradually he has grown nervous and anæmic. His urine flows without force, and the stream is frequently interrupted. After complete dilatation of a urethral stricture, several months ago, his symptoms were slightly relieved for a short time. Suspecting some growth within the bladder, Dr. Yarrow introduced an instrument and brought away a fragment of tissue, which proved to be papillomatous when examined under the microscope.

Frequent micturition, as a symptom, may accompany disease in any portion of the genito-urinary tract. The duration of the symptoms without the appearance of œdema, either of the face or the extremities, and the absence of tube-casts in the urine, will exclude Bright's disease of the kidney. As renal surgery recently has made such great strides, every surgeon is on the alert to detect renal disease demanding an operation. In this patient renal colic, which might indicate a calculus, has not occurred. Percussion and palpation of the abdomen do not reveal a displaced kidney or any enlargement from hydronephrosis, pyelonephrosis, or neoplasm. Neither irritative fever, the result of acute inflammations, nor hectic fever, due to the formation of pus, has occurred. There is a small amount of muco-purulent secretion in the urine, but far less than that which occurs in acute and chronic cystitis. In fact, the only constitutional symptoms manifested are those resulting from loss of blood and pain. Pain at the orifice of the urethra and frequently down the thighs is a symptom of vesical calculus; but the sensation in these parts is normal, while the sound does not detect a stone. The prostate body is not tender or swollen, and, with the absence of rational signs, excludes prostatic diseases.

In this case bloody urine has been a prominent symptom. Even a small quantity of blood imparts a smoky or mahogany-brown color to this secretion. In urine containing blood, more or less albumen will always be detected. The blood may escape from the kidneys, ureters, bladder, or urethra.

Blood from a kidney is generally uni-

formly diffused through the urine, because it enters the bladder drop by drop. The causes of kidney-hemorrhage are many, such as changes in the composition of the blood, injuries, inflammation, ulceration, neoplasms, and parasites. Hemorrhage from a ureter is very rare, except from the presence of a calculus, while the coagula formed are long, slender, and worm-like when floated in water. Bleeding from the prostate results from inflammation and hypertrophy, the clots being fusiform; that from the urethra is also generally occasioned by inflammation, stricture, or an impacted foreign body, while the clots are cylindrical in shape. Lastly, the blood may come from the bladder itself, and be the result of inflammation, injury, calculus, parasites, or neoplasms. Coagula from the bladder may resemble coffee-grounds, due to their being partially dissolved in the urine, or they may be flat and irregular in outline. In urethral hemorrhage the first portion of urine voided usually contains blood, while the last portion is clear. The reverse is the rule in vesical calculus, the blood appearing at the close of micturition; for at this stage of the act the contracting bladder grasps the rough calculus, which inflicts minute wounds in the mucous membrane.

In this patient, the clinical history and the physical examination would lead us to suspect some vesical neoplasm.

Morbid growths of the bladder are both benign and malignant. Of the benign growths adenomata are rarely observed, while the fibromata are usually found, especially the villous form, or so-called papilloma. In considering malignant disease, tubercle may be looked for only in conjunction with general tuberculosis; sarcoma is seldom observed, while the epithelial variety of carcinoma is the most common of its class.

I now propose to open the bladder by perineal section and make a digital exploration of its inner surface. The patient is placed in the lithotomy position. As the urine was recently voided, about six fluid-ounces of water containing mercuric chloride (1 to 2000) will be injected into the bladder. A grooved staff will be introduced and kept well against the pubic arch. The incision, about two inches in length, ending three-fourths of an inch above the anus, will be made in the median line, the raphé. After opening the membranous portion of the urethra, the staff is to be removed and a blunt gorget used to dilate the wound, to be followed by the finger. Sometimes the prostate gland is cut and the finger alone used to dilate the parts. If a growth is discovered, a serrated forceps will be used to separate it from the bladder by crushing its attachment.

Making supra-pubic pressure, every portion of the mucous surface of the bladder is brought in contact with my finger. The upper part is perfectly smooth, on the right and left sides low down there is slight thickening of the mucous membrane, and at the base a growth almost sessile in attachment is felt.

[A villous fibroma or papilloma, about the size of a walnut, was removed.]

The after-treatment will consist in perfect quiet, liquid diet, and opium if necessary.

TRANSLATIONS.

Herpes Zoster and Paralysis of Motor Nerves.—The combination, as yet not very frequently observed, of herpes zoster (the expression of disease affecting sensory or trophic fibres) with the paralysis of motor nerves can be traced back in one series of cases to a central lesion, in which the process from the trophic nerve-tracts has encroached upon the motor centres, or the reverse.

In another series of cases a peripheral mixed nerve is concerned. Besides these, however, there are still cases which can be referred to neither of these sources, and in which only the most external periphery of the nerve is affected. To this class belong those cases of herpes zoster of the face or the neck which occur in connection with paralysis of the facial nerve. To seven such cases collected by P. Strübing (*Deutsches Archiv für Klin. Med.*, Bd. 37, 1885) from medical literature, he adds one under his own observation. A man 52 years of age was exposed to the action of a cold draught of wind upon his face. A few hours later a neuralgia developed upon the left side of his face, which was followed by herpes, and a few days later by a paralysis of all the facial branches of the left facial nerve and the left chorda tympani.

As regards the question of the connection here between the zoster and the paral-

ysis, it cannot be set down as purely accidental. Reflex paralysis can scarcely be taken into consideration, because the facial paralysis presented the characters throughout of a peripheral and not of a central affection. Quite as unlikely, according to the reporter, could the view of Eulenberg be adopted, that in facial paralysis an eruption of herpes may be induced by irritation of the trophic fibres in the facial nerve (which possibly come originally from the vagus), because one and the same morbid agency would then have to cause irritation of the trophic part of the nerve and paralysis of the motor portion of the nerve. The connection in this and similar cases may be, with the greatest probability, sought for in some inflammatory process extending through the connecting fibres from one nerve to the other, so that a peripheral affection of a sensory nerve (which leads to herpes) will produce a peripheral facial paralysis, and *vice versa*. In other cases the connection may be so clear that one and the same injury (such as exposure to cold) may affect both the trigeminus and the peripheral branches of the facial, and develop herpes zoster and paralysis coincidently.—*Deutsche Medicinische Zeitung*, December.

Hypnotism during Parturition.—In the *Wiener Medizinische Wochenschrift* (No. 45), Dr. E. Pritzel, assistant to Prof. Karl Braun, reports a case of childbirth during hypnotism, probably the first of the kind on record.

The patient, single, 26 years of age, was admitted to the obstetrical wards of Prof. Braun in the eighth month of pregnancy. She had always menstruated regularly from her fourteenth year up to January of last year; since then her health had been good, and she had been entirely free from the nervous manifestations so common during pregnancy.

Upon examination, it was found that she was readily thrown into a hypnotic state by holding a thermometer-bulb before her eyes for a few moments: she became unconscious and insensible to all irritations, while her color, pulse, and pupillary reactions remained unaffected. At the end of a quarter of an hour or half an hour, the patient was aroused by long and continued irritation, shaking the body, blowing upon the cornea, slapping the breast with cold wet cloths, etc. After revival, she declared that she felt well after each experiment, but it was noticed that it was usually followed by a deep, but natural, sleep.

Labor set in October 30, and during the first stage she was restless and unmanageable. Cramps in the limbs and intensity of the pains during the second stage suggested a narcotic or the induction of artificial hypnotism. The latter expedient was adopted, and with entire success. She became unconscious and insensible. It was found that, instead of decreasing in force, the uterine contractions became more energetic, and were aided by the abdominal muscles. While the patient was entirely insensible, it was still noticed that she bent the left forearm as if cramp were present, and there was considerable stiffness in the left leg; the right side of the body was unaffected. Between the pains she lay motionless, as if asleep. A well-developed female child was born, which cried lustily; the placenta was expelled, under the influence of abdominal pressure, in three-quarters of an hour. The patient was wakened by holding ammonia to her nose and shaking her, after unconsciousness lasting an hour and a quarter. The confinement was in every other respect strictly physiological. In two other cases from the same clinic the method was also successful, although to a less marked degree.

Cocaine for Sea-Sickness.—Dr. W. Otto, physician upon a steamer between Bremen and New York, used cocaine hydrochlorate with much satisfaction in the treatment of sea-sickness during last summer. The dose for an adult was one-fourth to one-third of a grain, given for a single dose or three times a day. While these doses were well borne, larger ones did not control the vomiting; the remedy was usually given in ten-per-cent. solution by the mouth. The patients were directed during the first day to maintain a recumbent posture. Vomiting and nausea quickly disappeared, and sleep followed so uniformly that some thought they were taking morphine. The most successful cases were those of pregnant women, who generally suffer extremely with sea-sickness. There were a few cases which remained sea-sick, in spite of the cocaine, until the end of the voyage.—*Berliner Klin. Wochenschrift*, October 26, 1885.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 9, 1886.

EDITORIAL.

SOME MEDICAL PROBLEMS OF THE DAY.

MEDICINE is a progressive and therefore an imperfect science, but each step in advance provides a vantage-ground from which new fields may be explored. "Science," as the thought is gracefully expressed by Holmes, "is the topography of ignorance. From a few elevated points we triangulate vast spaces enclosing infinite unknown details." New responsibilities, new problems for solution, as the rule, grow out of each addition to our knowledge of pathology and therapeutics, and it is only exceptionally that some great discovery or new application, like the discovery of anæsthesia, vaccination, or the ligation of arteries, appears upon the scene to revolutionize medical practice.

Upon reviewing the work of last year in the medical world, we observe some errors committed, but more corrected, and many contributions to the common fund of knowledge which are apparently both new and true; while, if the assertion of Pasteur that the cure for hydrophobia has been definitely found can be accepted fully and literally, the year 1885 has been marked by at least one great medical discovery.

In general medicine, the study of bacteriology has lately led to improvements in technique rather than to new achievements in the field of the relation of microbes to morbid processes. Indeed, attention now seems to be particularly directed towards the peculiar condition of protoplasm in the living human body by which it is rendered a congenial host for the reception and cultivation of disease-germs. The question now is, What is the *quid intus* which must be present in the organism in order to produce a favorable soil for the development of germs? In what does vulnerability or susceptibility consist, how does it arise, and how may it be destroyed? What relation does such special susceptibility bear to the clinical picture which we call disease? Representing the morbid combination by ten units, will the susceptibility represent two or three and the germ eight or seven, or *vice versa?* or, in some cases, may the predisposition in reality be the disease, and the germ (so called) an incident or accident in its course? These problems are now before the profession for solution.

The problem of reducing or destroying susceptibility in the human organism by inoculation with a mitigated virus—so successful in variola—has not made much progress, Pasteur's experiments excepted. Ferran's protective inoculations against cholera in Spain were successful, it is believed, in the primary object for which they were practised (*i.e.*, providing for Dr. Ferran's family), but there is no reliable evidence to show that they possessed any scientific value whatever; on the contrary, they have caused erysipelas, septicæmia, ulcerations requiring amputation of limbs, and, in a few instances, death. The exposure of Ferran by the French Commission has thrown some discredit upon protective inoculation for epidemic cholera, but the prophylactic inoculations for yellow fever have been continued, and the reports from Freire and Carmona positively claim highly successful results.

The announcement of Pasteur to the French Academy last October that he had solved the problem of the prevention of hydrophobia by means of hypodermic injections of morbid material has attracted much attention to the subject, and, owing to the highly-flavored accounts published in the daily papers, many persons who have been bitten by dogs believed to be mad have been sent to him to be treated by his method. It is stated that he has in view the

establishment of an institution in Paris for the treatment of such cases. Similar institutions have been also projected in London, New York, St. Louis, and elsewhere.

With regard to this matter, it is well to bear in mind that rabies canina is a rare disease in this country, and that only comparatively few persons annually are bitten by dogs that are really mad. Of those bitten, authorities state that fully fifty per cent. will escape having the disease, even without any treatment whatever; in the others, immediate and thorough cauterization of the wound is pronounced an almost infallible means of preventing the future development of the disease. When the precaution of thorough cauterization has been taken, especially if combined with excision, as recommended by Gross, it is believed that the danger to be apprehended from subsequent hydrophobia is slight, and the necessity for the establishment of institutions for Pasteurization, therefore, infinitely small. Moreover, one of his patients, the papers state, has since died with hydrophobia, although the inoculation had been practised. Here the failure was attributed to the lapse of time between the bite and the hypodermic puncture,—thirty-five days having been rather arbitrarily set as the limit beyond which the treatment is useless. Before this treatment is generally adopted, the question must be considered, What is the danger from the inoculations themselves? Erysipelas and septicæmia may be not too heavy a price to pay for immunity from such a dread and fatal disease, but is there any possibility of the inoculation of the *materies morbi* giving rise to the very disease which the bitten one is most anxious to avoid? We cannot help regarding this new development of isopathy with some mistrust, at least until it rests upon a more secure foundation. In the mean time, we can but deprecate the evident popular craze upon the subject, which originated in premature and partial accounts in the public press.

Turning to subjects more directly concerned with pathology, we find that views advanced last year by Dr. Ord, in his presidential address before the London Medical Society, on the origin of pyrexia, are new and important. During the building up of complex tissues there is a loss of sensible heat; and it was held by Dr. Ord that, this constructive process being disturbed in fever, the heat is not locked up, as it should be, but continues active, and becomes added to the heat produced by excessive tissue-combustion. Fever-heat, then, is the joint result of interference, through disturbed innervation, both in the constructive and in the destructive metabolic processes. That the undue liberation of heat at the surface of the body is dependent upon some disorder of the nerve-centres has not been definitely established, and, for the present at least, we must regard fever as a disorder of protoplasm.

In surgery, among the many topics which might be considered, we may mention, as a positive evidence of progress, the publication by Lawson Tait of one hundred and twelve consecutive cases of laparotomy for operation or exploration, without a single death. The transplantation of the eye of a rabbit or a dog into a man's orbit for cosmetic purposes has been performed five times during the year, according to M. Terrier, who reported them to the French Academy of Medicine. In but one case, however, was the experiment successful, and that was performed by an American, Dr. Bradford, of Boston, who introduced a rabbit's eye into the orbit of a sailor thirty-five years of age, upon whom enucleation of the eye had just been practised.

Brown-Séquard announced to the Academy of Sciences that he had succeeded in causing general analgesia in man by introducing carbonic acid gas towards the end of inspiration, so as to act directly upon the larynx. The inhalations, if kept up for

twenty or more minutes, he stated, would produce analgesia and relief from pains, however induced, extending to forty or even to forty-eight hours. In connection with this, we think it is important to call attention to the employment of hypnotism as a substitute for anæsthetics in obstetrics, as in a case reported in another column.

Dujardin-Beaumetz adds to the list a new hypnotic, which, in recognition of its decided effects, he proposes to call "hypnone." It was discovered by Dr. Bardet and himself, and belongs to the aromatic series; it is a mixed acetone or aceto-phenone (phenyl-methyl-acetone). It is said to possess decided hypnotic properties in doses of from two to four drops to adult patients. It is not miscible with water, but may be given in capsules with glycerin. Injected hypodermically, it causes insensibility, followed by coma and death.

The preparations for the International Medical Congress to be held in Washington in 1887 have made decided progress. Within the last few months an independent executive committee was formed, and the necessary preliminary arrangements have been begun in a manner to inspire confidence in the present management of the affairs of the Congress, the prospects for which are decidedly better than they were one year ago.

The interest in sanitary matters and public health in the public mind has been maintained during the past year, and shows a healthy growth. In accomplishing this desirable end the American Public Health Association and the various State and County Medical Societies have contributed to a very great degree. Among the indications of progress may be mentioned the establishment of a State Board of Health in Pennsylvania, chiefly through the persistent efforts of the State Medical Society. It is hoped that public attention will now be directed to the great need of a State Board of Medical Examiners, and also of a change in our coroner system.

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NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

FOR the time being the country is absorbed in an election-struggle, and country doctors complain that they are doing little or nothing: betwixt the election and the depressed condition of agriculture, people do not want medical attendance. The medical candidates have met with rival fortune. Dr. Balthazar Foster, of Birmingham, has been successful as the Liberal candidate for Chester; Dr. Danford Thomas has fallen after a game struggle for Islington; Sir W. Guyer Hunter gained a metropolitan seat; Dr. Watney failed to secure Deptford; and Dr. Alfred Carpenter, who seemed a strong candidate for one of the divisions of Surrey, was defeated; while Prof. Erichsen is waiting the reply of the graduates of Edinburgh and St. Andrew's Universities, as did Dr. Gordon Hogg, in vain, for the opinion of the electors of Ealing in West Middlesex. The editor of the *British Medical Journal* has not succeeded in winning over the Radicals in the East End, and had a bad fall, finding comparatively few supporters. The danger of an even balance of parties, so as to put the Irish party into power and prevent all legislation until they were disposed of in some way, has largely passed away. Even for the brief time when it was impending, a curious trait in the Anglo-Saxon character manifested itself,—viz., their utter intolerance of any attempt on the part of an inferior race to coerce them. The Anglo-Saxon has been a comparatively merciful ruler towards subject races so long as they recognized his superiority and authority. But any attempt to cast off his yoke has been met by a stern, uncompromising resistance and a further fastening of the fetters. This was markedly seen in the behavior of the English at the Indian mutiny. It was stamped out effectually and promptly. During the past few days, when it seemed that Mr. Parnell, "the uncrowned king," was going to be master of the situation, the same spirit showed itself everywhere, and every one was talking of what must be done in order that the legislative arm of the nation should not be paralyzed; for, with a neat balance of power, neither side could rule except at Mr. Parnell's will. One thing was certain with all, and that was that Ireland should not rule England. When King Charles the First, in sore straits, intrigued to bring over so many Irish kerns to ravage England, the feeling manifested was strong and led to further alienation of the people from their king. So it was again. And even in the strife of parties and in the midst of a keen political contest, unanimity prevailed on this topic, and by common consent men of all parties were agreed to take measures against such a catastrophe. How-

ever, this danger, lately seeming so threatening, is already a matter of the past.

Within the medical profession, the two matters of gossip and speculation are: first, the matter of a university degree for London medical students, which is becoming a burning question; and, secondly, what is going to be done to that unworthy member of our profession who figured in the trial of which something was said in my last letter. As to the medical degree, a variety of propositions seem to be in the air. Of the great basal matter, the desirability of a degree on terms more reasonable than the existing "M.D. London," all concerned agree,—unless it be some of the present graduates of the London University. To put it broadly, it would appear that the position is somewhat like this: (1) a union of the two Royal colleges, which are non-teaching corporations and merely examining bodies; and (2) the formation of a teaching university. A third proposition has just emanated from University College in an inchoate form, the drift of which seems to be to convert University College into a teaching university. The exponent of this last device was Professor Ray Lankester, F.R.S., to whom has just been awarded the Royal medal of the Royal Society, in recognition of his important researches for a number of years in embryology and other biological and zoological subjects. The matter is being taken up in earnest, and there is every prospect that a solution will sooner or later be found; but it cannot be expected that the resultant decision will be acceptable to all parties. The rivalries and jealousies of the numerous schools, the lethargy of the two great corporations, are two great stumbling-blocks in the way of any and every conclusion. The agitation will have the effect of adding to the growing sense among the profession at large that the interests of students and of practitioners are, in the present state of matters (as in the past), utterly subordinated to those of the colleges.

The other is a painful matter, as affecting the position of the profession morally and socially. A medical man is largely a privileged man, who enters into the very *sanctum sanctorum* of families. The greater the confidence reposed in him, the greater should be his sense of responsibility and his care not to presume upon nor abuse that confidence. In my last I gave some account of the curious proceedings of an evening metropolitan newspaper in reference to the abuse of young girls. The judge's summing up ran closely upon the lines laid down in that letter, and the eccentric editor has now for some time been a prisoner in one of Her Majesty's jails. The judge made some strong comments upon the conduct of the physician who consented to take part in such questionable proceedings. So strong were they that all wondered what steps would be taken in the matter by the ruling powers of the medical world. The judge said,—

"Dr. Heywood Smith thought fit to examine this child after subjecting her to chloroform. Dr. Smith had been told that the child had been bought for immoral purposes; that an examination had been made by Madam Mowrey; that she had been taken to a brothel; and there was no doubt he had been told everything that had happened. Notwithstanding this, and having, I presume, the knowledge that neither Mr. Booth nor Mr. Stead had any right to deal with the child, he had the child sent to No. 27 Nottingham Place; went there himself at between two and three o'clock in the morning; had chloroform administered; and then examined the child. I do not hesitate to say that anything more discreditable to a medical man I cannot imagine; and I grieve to think that anybody belonging to that great profession to which Dr. Heywood Smith belonged should do such discredit to it. I say that advisedly, after a careful consideration of the circumstances."

The midwife who examined the girl without administering chloroform got six months' imprisonment. What happened to the other individual who also indecently assaulted the poor child? The Council of the British Gynæcological Society accepted his resignation of the post of Honorary Secretary, while admitting the valuable services he had rendered to it. The only other step was this: at a recent meeting of the General Medical Council, "in reply to a question addressed him on Thursday by Dr. I. H. Watson, the President of the Council said the Royal College of Physicians of London had under consideration the conduct of a registered medical practitioner, a member of the College, whose professional conduct had recently been severely censured by one of the English judges, and that it would rest with the Branch Council to decide what action should be taken in reference to the case, after the decision of the College of Physicians has transpired." (*Medical Press and Circular.*)

A fortnight has now elapsed, and the College of Physicians has not yet come to any conclusion: so that the Branch Council are still waiting patiently the judgment which is to give direction to their own action. Here the matter stands; and yet the College proposes to guarantee the conduct of its Fellows and members. There are two or three weeks' washing of dirty linen on hand already in Pall Mall. There stand over several instances of unbrotherly conduct on the part of its Fellows towards each other, and one of members towards each other; but in these cases there have been no opinions expressed by a judge to guide the College to a conclusion. Now they are face to face with something more than a scandal, and the public, as well as the profession, await their verdict. That a

body which has studiously practised shuffling as its line of conduct, and has evaded every occasion for a decision, while its own procedures have been marked by what may be called clandestineness, should feel very uncomfortable when called upon for decision under the fierce light of public interest in the question, is conceivable enough. Where infirmity of purpose and procrastination rule, it is hard to be put to a decisive conclusion before an impatient public. One can understand, if one cannot sympathize with, their dismay and hesitation. Here is the Branch Council of the medical parliament and judicial bench waiting upon their action, and evasion is impossible,—at least, one would think so; but, however, time will tell. It will be a novel spectacle to see the Royal College of Physicians of London taking up a distinct attitude on such a question; and its decision will come with much the same sense of strangeness as we would experience were an eclipse of the sun or moon to occur which has not been predicted.

In a paper read before the Medical Society of London recently, the writer expounded his views of gout. He pointed to the fact that, when kidneys first appear in the animal world, the form of excretion as regards nitrogenized waste is uric acid. Uric acid is found with animals with a three-chambered heart and a solid urine,—viz., birds and reptiles. When the mammalia appear, we find a four-chambered heart and a fluid urine, with the soluble urea as the form of nitrogenized excretion. Certainly a trace of uric acid remains in the urine of many mammals. When the human liver becomes impaired, depraved, or degraded, it fails in the (practically) complete conversion of nitrogenized waste into urea, and falls back upon or reverts to the primitive urinary product of the lower animals,—viz., uric acid. Gout, then, is (in its broadest sense) liver-reversion,—the formation of primitive urinary products by a mammalian liver. This definition throws a ray of luminous light upon the genesis of gout. Of the causal associations of gout and their relations to good living (in the present or in the past) the world has long been agreed. One man inherits gout, and has to practise the greatest self-denial in meat and drink throughout life in order to ward off the visits of his hereditary foe. But then it will be found, on investigation, that the individual is the product of a family which for generations has kept a table, and that a long-sustained struggle with an excess of nitrogenized food, lasting over several lives, has impaired the functional efficiency of the liver. On the other hand, the humbly-born alderman, whose liver is in all its integrity, can eat and drink to old age without making the acquaintance of the gout, sometimes, indeed, escaping himself scot-free, to hand down a tendency to uric-acid formation—along with his savings—to his descendants. This liver-reversion is intelligible, and helps us practically to deal with gout. It is quite clear that the first step is to reduce the demand upon the inefficient viscus. Physiological rest is of the greatest utility in enabling an impaired organ to regain its waning capacity. Consequently, it is well to cut down the amount of albuminoids in the dietary for a beginning. About that step there can exist no two opinions. Then as to the utility of uric-acid solvents, as lithia and potash, there is not much doubt. Dr. Garrod put us a good step forward when he showed that the comparatively insoluble uric acid and urates were readily soluble in the presence of these two bases; and in many cases, no doubt, it is a convenient method of dealing with uric acid so to wash it out of the system, daily doses of uric-acid solvents, well diluted, being taken to meet the daily formation of the uric acid. This is a great step forward, doubtless; but experience is beginning to tell us in unmistakable accents that something more is possible and practicable in addition to this. The liver is lowered as to its functional vigor, and insoluble uric acid is being formed rather than the soluble urea. That is one side-piece of the ladder of hypothesis. The other is that we are in possession of certain agents which are hepatic stimulants, and which have a special effect upon the liver. The group consists of sundry vegetables, of which the best-known are taraxacum, ipecacuanha, rhubarb, aloes, euonymin, iridin, and baptisin. Not only in true bilious conditions (where their value is generally conceded), but in lithæmic or gouty states, these agents possess a useful action. By their influence upon the liver they seem to have an elevating effect upon the processes by which waste and surplus nitrogenized matter are sent downward as products cast out of the body as urinary excreta. For some years now it has been the practice of the writer in cases of liver-inadequacy (whether cholæmia or lithæmia was the resultant malady) to combine these special hepatic stimuli with a general tonic like strychnia. Very satisfactory results have accrued from such a combination, especially where it is persisted in for some time. We all know how difficult it is to overcome a bad habit; and the organic viscera seem to acquire bad habits, as seen in chronic dyspepsia, the formation of renal calculi, recurrent liver-disturbances of the bilious nature, recurrent abortions in certain uteri, and the return of gouty states. Time, then, is an essential element in the treatment of such a vicious habit as the tendency to form uric acid. But by physiological rest as regards the metabolism of albuminoids—*i.e.*, lessened work and increased functional capacity, the effect of the hepatic stimuli—this morbid tendency can be to a great extent overcome. In one case which has been very carefully watched, where there

was a decided tendency to the formation of uric acid and a chronic gouty condition, and, after standing twenty-four hours, the pale urine had a pinkish hue, with a distinct deposit of cayenne, the change under the plan advocated above has been very marked. The urine is less in bulk, is of normal hue and odor when passed, and, on standing, no uric-acid deposit is found; while at the same time the general condition is very satisfactory. "One swallow does not make a summer," and, if the case stood alone and unsupported, it would possess but little clinical value. But when it is borne out by a series of allied cases it has a measurable value.

It is not perhaps very generally known that persons of thin flank do not bear alkalies well. In spare gouty persons (as indeed in spare bilious persons) alkalies are not well borne, as a rule. In such cases it is well to resort to hepatic stimuli rather than to uric-acid solvents: the alkaline lithia and potash. Even some stout and stalwart persons cannot tolerate potash. Lithia is less depressant than potash, but still it is too lowering for some persons. In such cases the line advocated above will give more satisfactory results. Phosphate of soda is an hepatic stimulant, and, where a mineral salt is indicated, is often most useful in liver-disturbances. In conditions of lithæmia and cholæmia it is of service, and it will often clear away the remains of jaundice in a satisfactory manner.

Therapeutic advances of recent years have taught us how we can act upon the nerve-centres of the heart when that organ is acting inefficiently. More recently we have discovered direct stimuli to the respiratory centres useful when the respiration is embarrassed. And now, it seems, we stand upon the threshold of acquaintance with remedial agents which can raise the tone of the liver when hepatic inadequacy is present and the system is suffering from the presence of toxic matters formed within itself.

J. Milner Fothergill, M.D.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held December 17, 1885, A. Jacobi, M.D., President, in the chair.

VAGINAL AND VULVAR ENTEROCELE.

Dr. T. Gaillard Thomas read a paper with this title, and said there were five varieties of hernia into the vagina and vulva: 1, cystocele, or hernia of the bladder; 2, rectocele, or hernia of the anterior wall of the rectum; 3, vaginal enterocele, or descent of a portion of the small intestine into the vagina; 4, pudendal enterocele, or descent of the small intestine into the labium majus, one or both sides; 5, perineal enterocele, or descent of the small intestine by protrusion through the perineum.

There might be exceptional cases going to form other varieties. Hernia of the bladder and anterior wall of the rectum were passed by with mere mention, and the author limited his remarks principally to descent of the intestine through the pelvic roof, with protrusion into the labium majus, vagina, or through the perineum. These forms of hernia were very generally ignored in systematic works on gynæcology, and indeed had received little attention in periodical literature. This was the more to be regretted because the condition, although a rare one, was very liable to lead to an erroneous diagnosis, and consequently to injurious treatment. While the cases were rare, they had been recognized a long time since, and a more graphic description of vaginal enterocele could not be given than that which had been given by Sir Astley Cooper in 1804.

Vaginal enterocele consisted in a descent of the intestines into the pelvic cavity either in front of or posterior to the broad ligament on one side. The descent was a little oblique, and most frequently occurred posteriorly. Usually the intestines alone descended into the protrusion, but sometimes they were accompanied by the omentum. Usually it was the small intestine. In vaginal hernia the parts were—first, the vaginal wall; second, the peritoneum; third, the intestine. The tumor might occur during labor and obstruct the progress of the fœtal head, and the obstetrician was liable hastily to infer that there was an ovarian or parovarian cyst with a long pedicle pushing down into the pelvis, and to plunge a trocar into it. If it occurred in a non-parturient woman he might undertake to remove the tumor, and find, to his horror, that he had cut away a portion of intestine. The condition might be brought on by the strains of labor, or by falls, or violent effort, etc. Strangulation seldom occurred. The symptoms consisted of difficulty in locomotion, pelvic tenesmus, dragging-down and colicky pains, tendency to constipation, and, in time, perhaps vomiting; if during parturition, there would be obstructed labor.

The physical signs of vaginal enterocele were a supple, soft, yielding tumor, decreasing on pressure, giving a sensation of gurgling to the finger if not heard by the ear, increasing on coughing and straining, yielding to pressure, and very generally reducible if the patient be placed in the knee-chest position and taxis practised.

Vaginal enterocele might be confounded with prolapsus of the vagina, uterus, bladder, or rectum, or a combination of these displacements; with vaginal cyst, parovarian cyst, or ovarian cyst, fibrous tumor low down in the pelvis, cold pelvic abscess, or marked

cases of tubal dropsy. But most cases presented striking features, and if one's attention were directed to the possible nature of the condition a mistake in diagnosis would not be likely to take place. The hernial tumors might show themselves in one of two ways: first, by brusque and sudden development, marked by alarming and decided symptoms; second, by slow development, with uneventful symptoms, the mere mechanical effects of the tumor finally attracting the attention of the patient. Rarely the cause of vaginal enterocele was a form of traumatism, causing the wall to give way.

In one case of vaginal enterocele, which Dr. Thomas saw in consultation with two physicians, one of the physicians, in order fully to satisfy himself of the correctness of the diagnosis, insisted upon introducing his entire hand into the vagina. In doing so he ruptured the vaginal wall at the site of the tumor. Dr. Thomas sewed up the rent, and the patient narrowly escaped death from acute peritonitis, and the physician was sued for malpractice. Another case had been recorded in which rupture of the vaginal wall of the tumor followed the use of tents. The rent was closed by silver suture, and the patient recovered.

There were two forms of pudendocele,—one being internal, commencing as in vaginal enterocele, but finally forming a protrusion of the labium, and the other the external or inguinal variety. The symptoms, which were almost pathognomonic of vulvar enterocele, were: 1, an airy feeling upon palpation; 2, gurgling upon replacement; 3, diminished tension in the dorsal decubitus; 4, diminution in bulk upon taxis; 5, resonance on percussion; 6, impulse transmitted to the hand on coughing; 7, intestinal pain, colicky in character.

Perineal hernia might affect either male or female. In the female it consisted in a descent of the intestine between the vagina and the rectum, the advance being posterior to the broad ligament, and continuing until the perineal muscles were forced apart and the gut, with its peritoneal envelope, was arrested by the skin. The sac lay between the vagina and the rectum.

All of these varieties of hernia were usually readily reduced, the reduction being greatly facilitated by the knee-chest position. In some rare cases strangulation occurred. Here the surgeon should cautiously open the sac and cut the constricting band by passing up a probe-pointed bistoury.

Dr. Thomas then related a remarkable case of extreme vaginal hernia which illustrated some unusual features.

The woman was 39 years of age. About six years ago she had noticed a lump in the vulva, and began to suffer from frequent micturition, pains in the back, nervousness, etc. The tumor gradually increased in size until it reached the middle of the right thigh. The patient became greatly emaciated and suffered extremely from the symptoms enumerated, and she was willing to undergo any treatment with a hope of obtaining relief. When by taxis she restored the tumor to the pelvic cavity, which could easily be done, she experienced such great difficulty in emptying the bladder and rectum that she was compelled to force it voluntarily out again. The tumor was of pinkish hue, and had the appearance of a huge cystocele. But this superficial impression was erroneous. After examining the tumor more carefully, and reducing it by taxis, Dr. Thomas concluded that it was without doubt a hernia of the intestine. It was utterly impossible to retain the tumor in its reduced position, for two reasons: first, because the pressure which it exerted against the bladder and rectum when within the body interfered with the function of these viscera so as to render the patient very uncomfortable; second, because of the great weight of the mass. Yet the condition of the patient urgently called for relief. Under these circumstances he suggested the following operation, which was eagerly accepted by the patient and her friends: to perform laparotomy; to have an assistant keep the tumor reduced by one hand in the vagina; empty the sac of its contents, seize it at its most dependent part, drag it up into the abdominal wound, fasten it there by suture, and sustain the heavy sac by two knitting-needles passed through it and lying flat upon the abdomen. Dr. Emmet and Dr. Bozeman confirmed the diagnosis and approved of the proposed operation. On opening the abdomen, his assistant pushed back the tumor, and the operator was surprised to find in the pelvis a soft fibrous tumor, which had been pushed up from below, on a level with the symphysis pubis, very movable, covered by peritoneum, disconnected with the uterus, and on careful examination proving to have no connection whatever with the bladder. The nature of the tumor could not be determined, but he decided to remove it. The sac was drained by a glass tube, and was fastened into the abdominal wound as had been proposed. The patient made a good recovery. It was now more than five weeks since the operation, and there had been no return of the hernia. Dr. Thomas, however, expressed some apprehensions as to the future. He thought the explanation of the case was that originally this very movable tumor entered the pelvic cavity behind the broad ligament on the right side, and with the weight of the intestines it pressed down upon the vagina, which it inverted. The contents of the sac were, then, the tumor and intestine. The microscopical examination was made by Dr. H. C. Coe, who said the structure was like that of an ordinary fibro-muscular tumor or a fibro-myoma of the uterus. It was not the bladder; it was not an ovarian cyst; it was not composed, at least

to any great extent, of inflammatory tissues. He submitted two theories as to the nature of the growth: first, that it was a local hypertrophy of the pelvic connective tissue; second, that it was a subperitoneal uterine fibroid which had become œdematous. He inclined to the former view, as did also Dr. Thomas.

Regarding treatment, there was but one variety of pudendal hernia—namely, inguinal—for which much could be done by mechanical appliances. Other varieties of hernia under consideration could only to a limited degree be relieved by such means. But it appeared to the author that the plan which he had partially carried out in the case reported promised more than any other yet brought forward.

Proposed changes in the constitution and by-laws were then read, and will be acted upon at the next meeting.

PHILADELPHIA ACADEMY OF SURGERY.

AT a stated meeting of the Philadelphia Academy of Surgery, held December 7, 1885, the President, Dr. D. Hayes Agnew, in the chair, several cases were reported, as follows:

CRUSH OF PELVIS AND COMPOUND FRACTURE OF LEG.

Dr. Nancrede: I desire to relate a case which is of considerable interest to myself and may be of some interest to the Academy. It is that of a man who was run over by a loaded wagon, one wheel traversing just above the crest of the ilium and running across the ramus of the left pubic bone. In some way the left foot became entangled, and he suffered from a compound comminuted fracture of both bones of the leg. There was simply a puncture of the soft parts, probably produced by one of the fragments. It was a compound fracture which would not *per se* have demanded amputation.

When I saw the man, three hours after the accident, he was suffering profoundly from shock. There was then a reasonable-sized effusion of blood just above the brim of the pelvis, extending into the scrotum and penis, but not involving the thigh. Scarpa's triangle was distinct and depressed. It seemed probable that the external iliac artery had received a severe injury. The limb was icy cold from Poupart's ligament all the way down. The arteries could not be detected anywhere below the brim of the pelvis. There was no hemorrhage from the compound fracture. The man was at this time in such a condition of shock that it was manifest that nothing could be done. He gave me the impression that he was suffering from concealed hemorrhage. My colleagues were, fortunately, in the hospital, and we examined him and came to the conclusion that the vessel was injured, but the man was not in a condition at the time for any operation, and that we would wait until reaction occurred. This did occur, and the temperature went up to 99°. I neglected to say that at the time of the examination the hæmatoma did not pulsate. When reaction supervened, bleeding again commenced, and when I saw the man the following day the whole thigh was tensely filled with blood. The effusion of blood beneath the peritoneum had extended from the median line about two inches above the pubes and the crest of the ilium and to within about two inches of the false ribs. The point of interest is that the limb had regained its temperature down to within two inches of the knee-joint. The hemorrhage was increasing, and I sent a note to my colleagues. While I waited, the subcutaneous hemorrhage seemed to ascend about half an inch.

The question was, What was to be done? The man was not in a condition for a hip-joint amputation, and the compound fracture was not one which under other circumstances would have demanded amputation. The collateral circulation had established itself to within two inches of the knee-joint. As there was nothing else to be done, it seemed to me that if the collateral circulation could establish itself under such adverse circumstances, it was possible that, if we secured the bleeding vessel and relieved the pressure upon the collateral circulation, it would doubtless maintain itself as far as it had gone, and might extend further and give an opportunity for secondary amputation.

I cut down, first, for the common femoral, and opened up a mass of blood and clot, and at once struck the artery, empty and contracted to two-thirds its size, but no wound was discovered. I next introduced my finger under Poupart's ligament into an enormous cavity. I found the iliac artery consisting for about half an inch of little but its stretched cellular coat, and I thought that I felt a rent in it. I passed a ligature, tying it above and below. It was found that one of the branches, I think the deep circumflex, had been torn off close to the iliac. I did not make the post-mortem, and am not quite positive as to the artery. The hemorrhage from this had ceased before I did the operation, for there was a clot in this branch and in the vessel. The vein appeared to be bleeding when I lifted it at the time. This I also tied. There was no more hemorrhage after the operation.

Where did the bleeding come from? The internal and middle coats of the external iliac were ruptured. The hemorrhage must have come from the arterial branch torn off, or the circulation must have been carried on through the injured external iliac, and come from the vein below. The fact that the collateral circulation set itself up so far is also interesting.

The further history of the case is that the man rallied and the foot seemed to me to get

warmer. The thigh retained its temperature, but the man gradually sank, and died about eighteen or nineteen hours later. The post-mortem showed that there had been no further hemorrhage. The external iliac had been tied three-fourths of an inch above Poupart's ligament. There was no fracture of the pelvis. Possibly if the vessel had been tied at first, the man might have rallied and the collateral circulation have been established in the limb below.

OPERATION FOR URINARY INCONTINENCE.

The President read the report of a case upon which he had operated for the relief of incontinence of urine:

A lady, who seven years ago had submitted to the operation of cystotomy for the relief of cystitis, consulted me some time since as to the propriety of closing the vesico-vaginal opening, as the constant flow of urine had become intolerable. The fistula was closed in the usual manner, by freshening its edges and uniting them together with silver sutures. It was found, however, that the urine still escaped involuntarily, and I supposed that the operation had failed at some point which had been overlooked. The parts were exposed, the bladder injected with milk and water, and found to be tight. The trouble arose from atrophic degeneration of the sphincter vesicæ, the result doubtless of long disease. To relieve this I proposed and executed the following operation. The mucous membrane was freshened at the neck of the bladder and for three-quarters of an inch forward, extending three-eighths of an inch on either side of the canal. After the denudation sutures were passed across the wound (not deeper than the submucous tissue), and the parts drawn together in a corrugated manner and secured by shot-clamps. The sutures were removed on the sixth day. No further trouble was experienced, and the patient remained perfectly dry.

A WANDERING STYLE.

Dr. Thomas G. Morton reported the following case: A lady came into my office a few days since, and stated that thirteen years since I had introduced, in her case, a gold style for a fistula of the tear-duct upon the left side. A week after the operation she stated that the head of the instrument, which was a small one, had disappeared. The fistule closed, and she had no further trouble until about two years ago, when she suffered considerably from facial neuralgia upon the left side. About this time she observed a pimple on the left side of the roof of the mouth, and soon afterwards this became an ulcer, and a hard, black substance like the end of a pencil projected and filled up the ulcerated part. This mass could be pushed up, but immediately reappeared when the pressure was removed.

An examination showed that the presenting hard body was the end of the style, which was readily removed with the aid of a dressing-forceps. The greater part of the style was thickly encrusted with calcareous deposit, which considerably increased its size. This, in addition to the head of the style, prevented its escape.

This is the only instance which has come under my notice where a style has worked its way through the roof of the mouth.

(To be continued.)

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, DECEMBER 10, 1885.

The President, J. C. WILSON, M.D., in the chair.

(Continued from page 258.)

DR. F. A. DERCUM presented the

BRAIN OF AN EPILEPTIC IMBECILE.

The dura was somewhat thickened, but not adherent. On puncturing it, five ounces of cerebro-spinal fluid escaped. The pia was adherent in a few places. The ependyma was reddened and injected, and the velum interpositum thickened. The convolutions were for the most part small, and the sulci shallow. The frontal convolutions were little more than outlined, and on the right the island of Reil was freely exposed. On each side the fissure of Rolando ran directly into the Sylvian. In the occipital lobes were the points of greatest interest. These lobes were remarkable for the smoothness of their surface. On the lateral surface only a shallow groove corresponded with the normal longitudinal occipital fissure. On the mesial surface the calcarine fissure was short and extended directly into the hippocampal, the posterior end bifurcated on the right, simple on the left. In the right hemisphere the parieto-occipital curved forward and ran for a short distance parallel with the fissure of the corpus callosum, then abruptly turned upward, terminating upon the lateral surface. A comparatively well-marked *pli de passage* was present, but made an obtuse angle of one hundred and twenty degrees with the calcarine. On the left the parieto-occipital made a right angle with the calcarine, and ran perpendicularly upward to end in a bifurcation on the lateral surface. On this side a large superior *pli de passage* was found. Microscopic examination of the paracentral lobule showed the cells in the upper part of the cortex, though numerous, rounded or irregular; in the lower part the cells were comparatively few; pyramidal cells were the exception, and only one or two of the usual large cells

were found. The walls of the vessels showed decided change.

The reporter remarked that the brain could only suggest atavism in a remote degree, being essentially an arrest of development, which was most marked in the frontal and occipital regions. Further, the condition of the pia and the lateral ventricles, with the excess of cerebro-spinal fluid, points to a brain essentially diseased.

Dr. FORMAD presented the

BRAIN OF AN IMBECILE.

As a young child the patient had been normal, the imbecility coming on after a sunstroke. The brain was markedly asymmetrical, the left cerebrum twice as large as the right, with an entire difference in the distribution of the convolutions. On the contrary, the right lobe of the cerebellum was twice the size of the left. The head was shaped to suit the brain.

Dr. DERCUM said that from the fact of the brain fitting so well into the skull, it would seem as though the condition might have been congenital. Still, in view of the traumatism and the age at which the symptoms commenced, he thought the condition rather one of atrophy. Not only were the primary convolutions perfect, but also the secondary: if it had been congenital, the secondary convolutions would most likely be absent, and the primary poorly formed.

Also, an

ANOMALOUS BRAIN,

from a boy, æt. 9 years. He had been healthy and of fully average ability. Death resulted from an accident. There is an entire absence of falx cerebri, the two hemispheres being connected by a bridge of brain-substance. There is nothing else abnormal.

Dr. FORMAD then continued his remarks on

THE CHARACTERISTIC LESIONS OF CHRONIC ALCOHOLISM,

and presented illustrative specimens.

Dr. J. P. STRITTMATER presented a

PRIMARY SARCOMA OF THE KIDNEY,

occurring in a child 5 years old. There was absence of a history of heredity. Enlargement of the abdomen was noticed soon after a fall, and progressed rapidly. The tumor — hard, rounded, and painless — extended from the crest of the ilium to the margin of the ribs on the left, with nodules extending to the median line. Towards the end the lower extremities became œdematous and the superficial abdominal veins enlarged. She died four months after the first symptoms. Post mortem, the left kidney was found enlarged to the size of a fœtal head, with a complete destruction of any normal structure. There were secondary deposits in the peritoneum, omentum, liver, spleen, and right lung.

Dr. FORMAD said he had examined the growth and found it to be a congenital rhabdomyoma, which had undergone sarcomatous change. Primary renal sarcomata rarely give metastasis, and he accounted for the numerous secondary growths in this case by the fact that the sarcomatous change was secondary to the rhabdo-myoma.

Dr. T. S. K. MORTON presented specimens from a case of

PNEUMONIA WITH MENINGITIS.

The patient, when first seen, five days after the initial symptoms, was profoundly comatose and rigid, with finely-contracted pupils and the physical signs of pneumonia. She died in a few hours, with no change in the symptoms. The dura was in spots slightly adherent. Extending the whole length of the longitudinal sinus was a firm white clot. A small vein, occluded by the clot, had ruptured and poured out about a drachm of blood. There was extensive suppurative lepto-meningitis, with considerable effusion in the ventricles. The upper lobe of the right lung was in a state of advanced red hepatization.

Dr. J. H. MUSSER said the extreme interest of this case arises from the association of apex pneumonia with meningitis, without any lesion in the body as ulcerative endocarditis or any septic process to account for their concurrence. As is well known, in apex pneumonia cerebral symptoms are very prominent, and, being attributed to functional disturbance of the brain, at the present day there is no attention paid to the active treatment of them. This case teaches the valuable lesson that we must learn to treat these symptoms more actively in many cases or we may expect frequently disastrous results.

Dr. TYSON said that, notwithstanding the absence in the history of any traumatism, he could not but think there might have been a blow on the head which was responsible for the pneumonia.

The PRESIDENT remarked that the absence of any history of traumatism in the case by which the meningitis might have been caused brought into prominence the lesions of chronic alcoholism, a condition in itself strongly predisposing to meningitis. The cerebral symptoms appear to have been not only more intense, but also different in kind from those met with in pneumonia, and particularly apex pneumonia. Though perhaps not more intense than is sometimes seen in the apex pneumonia of children, they were certainly different in character. The association of the two diseases pneumonia and meningitis he thought accidental rather than causal.

Dr. C. M. WILSON presented a

MENINGOCELE

taken from a patient dying sixteen days after

birth. The brothers and sisters were healthy, but the youngest had in the temporal region a nævus. The child died in convulsions. The tumor, which grew from the posterior fontanel, was as large as an English walnut, was filled with cheesy matter, and its cavity could be reached from the interior of the cranium.

The Committee on Morbid Growths reported: (1) Dr. Dunn's specimen, removed from the lumbar region of a cow, shows a combination of myxoma with lipoma; (2) Dr. Roberts's tumor, removed from the theca of the extensor tendon of the middle finger, shows the structure of a pure fibroma.

CARD SPECIMENS.

Dr. W. W. Edwards: Head and Neck of a Tænia Solium.

Dr. Morton: Bony Tumor projecting from Right Side of Falx Cerebri.

Dr. J. M. Keating: Congenital Cystic Liver.

Dr. R. G. Curtin: Tricuspid Insufficiency.

Dr. J. S. Neff: Chronic Endo- and Pericarditis. Heart weighing fifty-six ounces.

Dr. Tyson: Acute Pericarditis.

Dr. Formad: Acute Pericarditis; Heart with Three Ventricles; Rhabdo-myoma of Kidney: Two Cases of Spina Bifida; Congenital Diaphragmatic Hernia; Congenital Occlusion of Rectum.

W. E. HUGHES, M.D.,
Recorder.

REVIEWS AND BOOK NOTICES.

ACNE: ITS ETIOLOGY, PATHOLOGY, AND TREATMENT. A Practical Treatise based on the Study of One Thousand Five Hundred Cases of Sebaceous Disease. By L. DUNCAN BULKLEY, A.M., M.D., etc. New York and London, G. P. Putnam's Sons. 1885. Octavo, pp. 280.

Dr. Bulkley's latest volume is one of the best, if not the very best, of the works that have proceeded from his fertile pen. It is a monograph of high value, and gives additional lustre to the fame of American dermatology. The fault which we found with his monograph on eczema—that of a redundancy of style and matter so great as markedly to impair the interest of the book—has, fortunately, in great measure been avoided in the book before us. The style, without being at all concise, is not wordy, and there is little in the work that can safely be skipped.

The book opens with a discussion of the anatomy and physiology of the sebaceous glands. This portion is illustrated by a number of original cuts. Then follows a chapter on classification, nomenclature, definitions, etc. At this point is interpolated a chapter on the frequency of sebaceous diseases, with the statistics of fifteen hundred cases. This part, we think, might have been condensed with advantage. After another chapter on the etiology of sebaceous diseases, Dr. Bulkley goes on to discuss the various affections which he includes under the designation of acne. These embrace diseases like seborrhœa, comedo, milium, and acne molluscum, which have not hitherto in this country been classified as acne. Dr. Bulkley is, we are inclined to think, right in classifying these non-inflammatory affections of the sebaceous glands with the inflammatory ones, as they certainly come under the same general category.

That portion of Dr. Bulkley's book which discusses the etiology, treatment, etc., of the different affections is, of course, practical and interesting. Departing from the plan followed in his monograph on eczema, Dr. Bulkley gives occasionally the story of some individual cases, which add liveliness to his pages and illustrate like pictures the general principles of management laid down in the text.

Regarding treatment, we regret that Dr. Bulkley has found it convenient to place all his formulæ at the end of his book, as it is awkward for any one reading it to refer back and forth so frequently as is necessary in many cases. Our experience with this plan of putting all the formulæ together has been that it is annoying to the student, while extremely attractive to the hungry fisher of prescriptions, who flies to the formulary convinced that, if he can only copy a sufficient number of "recipes" into his note-book, he shall be possessed of all the author's wisdom.

The directions as to the general management of the various affections, and especially the principles of treatment laid down, are in the highest degree important and interesting, and, did space permit, it would be interesting to comment upon this portion of Dr. Bulkley's book.

We cannot close this notice, however, without alluding to one point in the etiology of acne as discussed by Dr. Bulkley. This is the relation between sexual derangements in the male and diseases of the sebaceous glands. Dr. Bulkley says that, "although the actual marriage state does not appear to have very much effect upon the occurrence of acne, it is undoubtedly true that unnatural sexual life may, and often does, have much influence upon its production." A great deal of pernicious nonsense has been written upon this subject, and much humiliation and mortification have been caused by blunt assertions of sexual immorality made by physicians to young men suffering from acne. While boys and young men of delicate health and sedentary and seclusive habits are more apt to indulge in vicious ideas and practices than robust youth given to out-door and gregarious pursuits, the acne which we meet with in the former is due to ill health directly, and not to

unnatural sexual indulgence. Such, at least, is the invariable experience of the reviewer from a long familiarity with and study of cases of acne occurring in youth.

A Reference Hand-Book of the Medical Sciences: Embracing the Entire Range of Scientific and Practical Medicine and Allied Sciences. By various Writers. Illustrated by Chromo-Lithographs and fine Wood-Engravings. Edited by Albert H. Buck, M.D., New York City. Volume I. New York, William Wood & Co., 1885. Quarto, half-morocco, pp. 808.

The scope of this magnificent work is encyclopædic,—embodying, as it does, contributions from various authorities, treating in a compendious manner the principal subjects upon which medical men are likely to desire information. Consisting, when complete, of eight volumes of about eight hundred pages each, it will constitute in itself a valuable reference library. The editor has wisely pursued the course of selecting the topics to be discussed, giving the most space to matters of a practical nature, such as diagnosis and treatment, but at the same time not neglecting to make ample provision for such departments as medical botany, climatology, embryology, physiological and pathological chemistry, applied anatomy, medical jurisprudence, military and naval surgery. The first volume is handsomely printed, in double column, with clear type, and is freely illustrated with excellent cuts and some full-page chromo-lithographs. The subjects extend from Aachen to Cataract; the principal articles are signed by their writers, and are almost without exception of marked value as epitomes of the present state of knowledge on the various topics treated. We had intended to notice some articles which especially attracted attention, but, as mention might be invidious where the work is so uniformly good, we will simply confine our congratulations to the editor, and predict for this work a very favorable reception by the profession.

Leonard's Physician's Pocket Day-Book. Bound in Red Morocco, with Flap, Pocket, and Pencil-Loop. Price, postpaid, one dollar. Published annually by the *Illustrated Medical Journal* Company, Detroit, Michigan.

This popular day-book is now in its ninth year of publication. It is good for thirteen months from the first of any month on which it may be begun, and accommodates daily charges for fifty patients, besides having cash department and complete obstetric records. There are also columns for the diagnosis of the case or for brief record of the treatment adopted following each name-space. Name of patient needs to be written but three times in a month.

Physician's Visiting-List, 1886. Thirty-Fifth Year of its Publication. Containing Calendar, List of Poisons and Antidotes, Dose-Tables rewritten in Accordance with the Sixth Revision of the United States Pharmacopœia, Marshall Hall's Ready Method in Asphyxia, Lists of New Remedies, Silvester's Method for Producing Artificial Respiration (with Illustrations), Diagram for Diagnosing Diseases of the Heart, Lungs, etc. Lindsay & Blakiston, Philadelphia.

This pocket day-book is bound in morocco, and fastens with a flap. Besides the visiting-list, it contains some tables for ready reference, giving important hints for emergencies. It is a favorite day-book with busy physicians.

The American Journal of the Medical Sciences, the oldest American medical journal, appears with a new arrangement in its January issue, which contains a number of contributions from English as well as from American sources. Its editor has taken this step and secured a corps of contributors in Great Britain with the avowed object of making it "the international representative of the medical thought and work of the English-speaking races." As it has always been devoted to the best interests of the medical profession, all are interested in its permanence and success, and its new departure will be welcomed, as it widens its field of usefulness.

Lippincott's Monthly Magazine will appear hereafter on the first day of each month. Under its new editor a number of changes have been made which decidedly increase its attractiveness: it has a new cover of very neat design; the old double-column page has been replaced by a leaded full-width page; and illustrations have been omitted. It is handsomely printed, and very inviting in appearance and in contents. The subscription-price has been reduced to two dollars, and the *Times* and *Magazine* will both be sent for one year for three dollars and twenty-five cents.

Mimik und Physiognomik.—An enlarged and complete edition of this work, by Dr. Theo. Piderit, has just been issued by the Meyer Publishing-House in Detmold. This work, when it first appeared, attracted marked attention on account of originality in the treatment of the subject; and in the second and greatly-improved form it will be welcomed by those especially interested in its scientific consideration.

The Medical Times and Gazette discontinued publication at the close of the year. It was one of the old London weeklies, and its discontinuance is a decided loss to medical journalism.

THE AMERICAN PRACTITIONER AND NEWS.—The *Louisville Medical News* of December 26 contains a notice of consolidation, on the first of the year, of the *News* with the *American Practitioner*, to be issued as a bi-weekly, with the above title, under the editorial management of Drs. D. W. Yandell and H. A. Cottell.

THE MEDICAL PRESS OF WESTERN NEW YORK, published at Buffalo, is a welcome addition to journalism. It is well printed and well conducted, and will doubtless receive hearty support from the profession.

NEW BOOKS.

HAND-BOOK OF THE DISEASES OF THE NERVOUS SYSTEM. By JAMES ROSS, M.D., LL.D. With One Hundred and Eighty-four Illustrations. Lea Brothers & Co., Philadelphia, 1885. 8vo, sheep. Pp. 723.

TEXT-BOOK OF OPHTHALMOSCOPY. By EDWARD G. LORING, M.D. Part I. Illustrated. D. Appleton & Co., New York, 1886. 8vo. Pp. 274.

A TREATISE ON THE DISEASES OF INFANCY AND CHILDHOOD. By J. LEWIS SMITH, M.D. Sixth Edition, thoroughly Revised, with Forty Illustrations. Lea Brothers & Co., Philadelphia, 1886. 8vo, sheep. Pp. 867.

TRANSACTIONS OF THE ACADEMY OF MEDICINE IN IRELAND. Vol. III. Dublin, 1885.

TRANSACTIONS OF THE AMERICAN SURGICAL ASSOCIATION. Vol. III. 1885.

A MANUAL OF MICROSCOPICAL TECHNOLOGY. By DR. CARL FRIEDLAENDER. Translated, with permission, by STEPHEN YATES HOWELL, M.D. G. P. Putnam's Sons, New York and London. 12mo. Pp. 249.

MISCELLANY.

MIZU AME, OR JAPANESE MALTINE.—Dr. J. C. Berry, of Okayama, gives the following interesting account of the process of manufacture of *Mizu Ame* in Central Japan:

1st, Malt (*moyashi*). Made by putting barley into a pail with a perforated bottom, and then moistening with water for two weeks, by which time (varying with the weather) the barley germinates. Spread and dry, rub off the sprouts, winnow and grind, when it is ready for use.

2d, Of *mochi-gome* (the very glutinous rice from which the *mochi* is made) one *to*,* cook the rice by steaming in a wooden box until moderately soft. Remove to a pail, and add: malt, four hundred and fifty *momme*,† water five *sho*.* Then with the hands thoroughly mix the whole, squeezing and crushing the rice until it assumes a hard, jelly-like consistence; then allow it to remain for twelve hours, during which time stir three times. (If the weather is very cold, it is covered with straw mats; if very warm, it is kept in a cool place.) Remove, and place in hempen bags, put into a strong box, and press out the liquid with firm pressure. Lastly, evaporate to proper consistence over a slow fire.

Mizu ame was never used in Southwestern Japan other than as an article of diet for babies, weakly children, and old people, until recently, and at present its use is largely confined to those who have been brought in contact with or instructed by foreign physicians. I have used it considerably during the last five years, more especially in cases where food-medicines are required; and, after being properly diluted, frequently prescribe it with dialyzed iron and with cod-liver oil. I use it more or less on my table as an article of diet, instead of syrup or honey, especially with one of my children who has a weak stomach. I imagine that its one single advantage over malt or maltine is its more easy digestibility. —*Supplement to Transactions of Sei-I-Kwai.*‡

COLLEGE OF PHYSICIANS OF PHILADELPHIA.—At the January meeting, held on the 6th instant, Colonel George E. Waring, Jr., of Newport, R.I., delivered an address on "The Disposal of Sewage and the Protection of Streams used as Sources of Water-Supply."

After the address a business meeting was held, at which reports of committees were received and an election for officers and committees held. The following were elected for the ensuing year:

President, Dr. S. Weir Mitchell; Vice-President, Dr. John H. Packard; Secretary, Dr. Isaac Norris; Treasurer, Dr. Charles Stewart Wurts; Honorary Librarian, Dr. James H. Hutchinson; Recorder, Dr. J. Ewing Mears; Censors, Drs. Lewis Rodman, William Goodell, Alfred Stillé, Samuel Lewis; Councillors (to serve until January, 1889), Drs. Richard A. Cleemann, William Thomson; Committee on Publication, Drs. James H. Hutchinson, Robert P. Harris, Arthur V. Meigs, J. Ewing Mears; Committee on Library, Drs. I. Minis Hays, Samuel W. Gross, Morris Longstreth, George C. Harlan, William Osler; Committee on Mütter Museum, Drs. William Hunt, John H. Brinton, Morris Longstreth; Committee on Hall, Drs. Horace Y. Evans, Thomas Hewson Bache, J. Ewing Mears, Morris J. Lewis, William Barton Hopkins; Committee on Lectures, Drs. Joseph Leidy, William Goodell, William F. Norris, John H. Packard, Samuel W. Gross; Committee on Directory for Nurses, Drs. William W. Keen, Wharton Sinkler, James C. Wilson.

PHILADELPHIA COUNTY MEDICAL SOCIETY.—At the annual meeting for the election of officers, held January 6, the following were elected for the ensuing year:

President, Dr. R. J. Levis; Vice-Presidents, Drs. William R. Cruice, Charles Wittig; Re-

* 1 *to* = 10 *sho* = 1097 cu. in.
† 120 *momme* = 1 lb. avoirdupois.

‡ Mizu ame has been imported and is on sale by Mr. G. I. McKelway, of this city.

cording Secretary, Dr. S. Solis-Cohen; Assistant Secretary, Dr. Benjamin F. Nicholls; Corresponding Secretary, Dr. M. S. French; Reporting Secretary, Dr. William H. Morrison; Treasurer, Dr. L. K. Baldwin; Censor, Dr. F. P. Henry; Librarian, Dr. C. M. Seltzer.

The following was, on motion of Dr. D. Hayes Agnew, adopted by the Society:

"*Resolved*, That at its annual election of delegates to the American Medical Association and to the State Medical Society the Philadelphia County Medical Society desires to express its regret at the action of the American Medical Association at New Orleans, in view of the injurious results which followed to professional harmony and to the prospects of the International Congress.

"*Resolved*, That the delegates from this Society be instructed to endeavor to secure such modification of that action as may best conduce to the re-establishment of professional harmony and to the success of the Congress."

PHILADELPHIA HOSPITAL.—At the December meeting of the Guardians Dr. Philip Leidy, formerly Port Physician, was elected Chief of the Insane Department of the Philadelphia Hospital in place of Dr. D. D. Richardson, and Dr. Andrew Nebinger was elected Consultant in place of Dr. H. C. Wood. Drs. S. Weir Mitchell and C. K. Mills were also elected Consulting Physicians to the Insane Department. The attending staff of the Department for the Sick was re-elected and enlarged,—Drs. William Osler and John H. Musser being added to the Medical, Drs. Alexander W. Ransley and L. W. Steinbach to the Surgical, and Drs. Elliott Richardson and E. E. Montgomery to the Obstetrical.

COLDEN'S LIQUID BEEF TONIC.—This excellent preparation has become deservedly popular with the medical profession in the treatment of diseases where an agreeable article of diet and tonics are required. It is recommended in typhoid and malarial fevers, consumption, loss of appetite and debility induced by any cause, and it is tolerated when other forms of animal food are rejected.—*Maryland Medical Journal*, Baltimore, Md.

NEW YORK ACADEMY OF MEDICINE.—A Laryngological Section was formed December 23, when an interesting paper was read by Dr. R. P. Lincoln, entitled "The Surgical Uses of Electricity in the Upper Air-Passages," which led to a general discussion. Dr. Lincoln was elected chairman of the Section, and Dr. D. Bryson Delavan Secretary.

THE annual address before the Academy of Surgery of Philadelphia was delivered by Dr. R. J. Levis on last Monday evening, January 4, at the hall of the College of Physicians, the subject being "Impediments to the Progress of American Surgery."

NOTES AND QUERIES.

OBITUARY.

JOSHUA B. LIPPINCOTT, the founder of the publishing-house and the president of the J. B. Lippincott Company, died on the 5th instant at his home in this city, aged seventy-four years. For a long time he had been a sufferer with nephritis, and two years ago he had an attack of pneumonia, followed by a disorder of the heart, which seriously undermined his health. During last year it became evident that health could not be regained, and death appeared imminent. In view of this change, he made arrangements to have the great business which he had built up continued after his death by converting it, last February, into a stock company.

Mr. Lippincott was known to the profession as the publisher of many of the standard medical works, and of *Lippincott's Magazine* and the *Philadelphia Medical Times*. He was one of the Trustees of the University of Pennsylvania, and took a warm interest in all matters connected with medical education.

PARTURITION IN THE NEGRO.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

Having been connected with the medical profession for several years, there have arisen during that time many questions with seemingly no answers to them,—at least none satisfactory to me,—and among them is the ease with which the negro woman (the genuine black woman) gives birth to her children. And why is she so much more exempt from the diseases incidental to the lying-in period than the white woman? for a few days, in a general way, is all that she observes. During the whole of my professional life I have but once seen the necessity for using the obstetrical forceps. I have seen not one unnatural presentation, and but two cases of eclampsia, one before and the other after birth. Neither have I seen a case of puerperal fever, milk-leg, prolapse nor retroversion of the uterus. I have never known one to die in labor, or from any of its sequels, in this community. But as soon as we leave the genuine black race and approach the Anglo-Saxon, troubles and tribulation among the female sex stand thick on every hand. These black women are more exposed to the climate, and are less well fed and clothed, living in huts or small houses,—many without windows or plastering,—with nothing but the naked weather-boarding between them and the heavens, and yet they seem to have no more trouble than the animal creation. They sicken and die with the diseases of the climate, like the white race, but in this Providence has in his wisdom seen proper to protect them. But outside of this there must be some law that governs them which the Anglo-Saxon race would do well to study and to bring into practice. It occurs to me, if it works well with negroes, why not with the white race in the same cases? I think my experience will compare favorably with that of other physicians.

Yours, J. A. H.

MILTON, DELAWARE, December 5, 1885.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM DECEMBER 20, 1885, TO JANUARY 2, 1886.

FRYER, B. E., MAJOR AND SURGEON.—Sick-leave extended six months on surgeon's certificate of disability. S. O. 292, A. G. O., December 21, 1885.

VICKERY, R. S., MAJOR AND SURGEON.—Relieved from duty in Department of Columbia, to repair to Washington, D.C., and report in person to Surgeon-General for duty in connection with Army and Navy Hospital, Hot Springs, Arkansas. S. O. 293, A. G. O., December 22, 1885.

REED, W., CAPTAIN AND ASSISTANT-SURGEON.—Leave extended one month. S. O. 293, A. G. O., December 22, 1885.

MADDOX, THOMAS J. C., FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Killed December 19, 1885, in affair with Apache Indians near the White House, New Mexico.

IVES, F. J., ASSISTANT-SURGEON.—Ordered to report to commanding officer, District of New Mexico, for duty in the field. S. O. 127, Department of the Platte, December 23, 1885.

PHILADELPHIA, JANUARY 23, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE PRESENT SCOPE AND AIM OF ELECTRICITY IN MEDICINE.

BY JAMES HENDRIE LLOYD, M.D.,

Instructor in Electro-Therapeutics in the University of Pennsylvania.

(Delivered to the Fourth Year Class.)

GENTLEMEN,—It is cause for congratulation that a therapeutic agent which has been so often misapplied by empirics and so generally abused by charlatans has been of late years so thoroughly submitted to scientific methods that it has attained a name for approximate certainty which is clearly excelled by very few drugs. That these severe tests have narrowed its realm and curtailed its prerogatives in many ways may be disappointing to the "electropath," but to the true scientist it is perhaps only an additional guarantee that what is known is genuine and what is discarded is false. The scope of the science is, in truth, not very ample. It includes, as its most striking feature perhaps, the results obtained in diseases of that neuro-muscular apparatus which is made up of the trophic cells in the anterior horns of the cord, the peripheral nerve, and the muscles of distribution. This apparatus forms an important half of that reflex arc which is the only nerve-organism of the lower forms of animal life. This fact would seem to suggest the propriety of testing these lower forms of life for identical results with those obtained in man, which would require a nicety of experiment to which our therapeutic instruments are not adapted. This subject suggests another query. Since the irritability of the cortex cerebri has been proved, and certain motor points seemingly established, would it not be well to have the qualitative and quantitative reactions of these motor points more thoroughly investigated, and especially with a view to any possible reaction of degeneration? The writer does not recall that in the experiments of Ferrier and others such investigations have been made.

The contributions of electro-therapeutics to the diagnosis and treatment of these trophic diseases alone merit for the science the respect and confidence of the profession, and remove from it the opprobrium of being the true handmaid of quackery. That we have an agent which will tell us, often before changes are visible, that the trophic centres are involved is a fact of obvious importance, as is also the fact that a hysterical paralysis can often by the same agent be ferreted out and distinguished from the far more serious anterior poliomyelitis. In this connection, however, it is well to emphasize an important point,—viz., that the abnormal reactions are, as their name signifies, the reactions of *degeneration*, and not merely of *paralysis*. Hence, in mild forms of peripheral palsy due to pressure or traumatism, it is not common to find the reactions of degeneration, because degeneration does not occur. I have very generally failed to find all the abnormal reactions in light forms of wrist-drop due to pressure of the head on the musculo-spiral nerve during drunken sleep. The changes observed in these cases have usually been a slightly diminished faradic contractility, and perhaps a somewhat prolonged contraction of the muscle to galvanism, results which are to be expected in healthy muscular tissue when cut off from nerve-influence. These conclusions are confirmed by several cases observed during the last fall.

The following case is an illustration of more serious peripheral paralysis:

M. G., middle-aged man, suffered from a pistol-wound which had been self-inflicted, by accident, near the elbow-joint. The ulnar nerve lay almost between the wounds of entrance and exit, and had been no doubt grazed by the ball. There was no paralysis at first, but very severe pain in the course and distribution of the nerve. Treatment by anodynes and local revulsives was ordered, but the patient soon became careless and absented himself from the hospital for a period of six weeks. When he returned, the limb presented the characteristic appearance of profound change in the ulnar group of muscles. The flexor of the wrist and deep flexor of the fingers were much wasted, the interosseous spaces were hollowed out because of the loss of the little interosseous muscles, and the inner margin of the thenar eminence was lessened by the wasting of the adductor of the thumb. The reactions of degeneration were marked. Faradic contractility much diminished, in some muscles perhaps abolished. To galvanism there was diminished response, long, slow contractions, and the

anode at closure produced more response than the cathode. Prognosis in this case was guarded, but in the main hopeful. The man has again absented himself. The treatment would have been galvanism, because that current alone excited the muscle to contract; but as soon as faradic contractility returned, this current would have been preferred as more stimulating to the muscles and more convenient to apply.

I believe faradism is more stimulating to muscles because of the mere mechanical effect of numerous rapidly-repeated irritations. It requires, however, a certain degree of activity in the nerve, as muscular tissue alone will not respond to it. Therefore in such a case as the foregoing it would be useless to employ it until repair had gone far enough to allow the injured nerve to regain influence over the muscle, as would be shown by the muscle responding to the induced current.

The following case illustrates the practical value of electro-diagnosis:

T. B., a negro, had paralysis of the facial nerve, with slight inequality of the pupils (but no ptosis or strabismus), also much vertigo and some deafness. There was grave suspicion of a syphilitic taint, and it was desirable to eliminate the possibility at least of cortical or meningo-cortical lesion. The reactions of degeneration were found in the facial muscles, which proves a peripheral lesion. The inequality of the pupils was found to have depended upon some eye-drops which a neighbor had given the patient, and which no doubt contained atropine; and the diagnosis was of syphilitic disease of the temporal bone, causing pressure on the facial nerve. In this case the electro-diagnosis, if not essential, was at least confirmatory.

In simple rheumatoid neuritis of the facial it has seldom been my misfortune to see a case advance to *total* abolition of faradic contractility. The Nervous Clinic at the University has presented three or four cases of the disease during the last fall, in all of which we had diminished faradic contractility, with quantitative increase to galvanism followed by decrease, and slight abnormal change in anodal and cathodal electrotonus. In these so-called *partial* reactions of degeneration I think it is sufficient for us to accept the facts without trying to explain them by elaborate schematic drawings, which are at best but theoretical. There may be a difference between myo-trophic and neuro-trophic centres in the spinal cord (?), but the fact did not appear until made necessary by the obscure phenomena of partial degeneration reaction.

In orthopædics it seems probable that much more use could be made of electricity for diagnostic purposes than is the custom, in our midst at least. The club-feet of children are doubtless caused by attacks of anterior poliomyelitis in limited areas, causing paralysis and degeneration of muscles, either separate or in groups. To understand the mechanism of these deformities, it is quite essential to know what individual muscles are involved, and not only what the exact action of these muscles is, but also the effect of their paralysis upon other muscles which have been to them diverse forces of resistance. To detect these muscles by electro-diagnosis would seem to be theoretically quite possible; but in practice there are obstacles which are not always easily overcome. The diffusion of the current to adjacent muscles is often a source of confusion: this is best overcome by using an olive-pointed electrode and by knowing exactly the motor points. Another source of error possibly is the fact that the disease is not far advanced, and we may therefore have only the partial reactions of degeneration above referred to. A difficulty is also found in the fact that some of the muscles are very deep seated. This is true especially of such muscles as the extensor proprius pollicis and the long flexors of the toes. I have found that a response is best secured in such muscles by applying the electrode along the tendon as close up to the muscular tissue as possible, just where it emerges from beneath the superimposed tissues.

There is a condition of muscle called subacute rheumatism, which is probably not rheumatic, but is more properly a myalgia, or, better, a subacute myositis. We have doubtless in these muscles nutritive changes which amount to a limited hyperplasia and which bind the muscle down. Such troubles are more often caused by over-use, strain, or direct injury than aught else, and the remedy for them in the chronic stages is, *par excellence*, faradism. It can be used by ordinary sponge-electrodes; and a tetanization of the muscle by the rapid interruptor is time-saving and perfectly harmless. The success of this treatment probably de-

pends upon the "breaking-up" of this hyperplastic condition. I have seen it act well in lumbago, while the patient amused himself with salicylic acid. It is especially serviceable about the shoulder-joint, as the following case testifies:

B., a professional base-ball player at "short stop," had severely strained his supra- and infra-spinatus and biceps muscles by a long throw. He had passed the acute stage, but the joint remained stiff and painful. The application of the faradic current as just mentioned gave relief from the very beginning of treatment.

It is customary to say that the galvanic current, especially the positive pole, is a remedy for neuralgia, and Billroth's wonderful case is made to do duty again as an example. I can only say that its use is often disappointing and never, in my experience, attended by remarkable results. It is sometimes palliative, however, and therefore worthy of trial.

The electrolytic and so-called catalytic action of the galvanic current is constantly attracting more attention. The good effects of this treatment are recorded in stricture of the urethra, in fibroid tumors of the womb, in the nutritive and inflammatory diseases of the female pelvis, and in aneurism. These diseases do not come within the range of neurology, but a few comments are not inappropriate.

Dr. Paul Mundé, in a recent paper, has recorded his observations with electricity in gynæcological practice, and it is interesting to note that his practical experience is in accord with theoretical data. Faradism is indicated most probably by reason of its stimulating effects upon muscular tissue, and hence has been found useful in cases especially of deficient development of the uterus, in subinvolution and displacements; while galvanism has benefited the hyperplasia following the various inflammations of the female viscera. In obstetrics it would be worth while perhaps to try faradism more frequently in premature and retarded labors and in some cases of post-partum hemorrhage. In the treatment of aneurism the criticism of De Watteville is all-important. He claims that failures result from not using a sufficient intensity of current, which ought to reach from forty to fifty milliampères in order to obtain the electro-chemical effects. These results could only be obtained, of course, by the use of a proper electro-motive force in reference to the resistance to be overcome, and by taking accurate measurements with a galvanometer.

The measurement of current-strength in the medical use of electricity is now a recognized necessity. We must no longer use our agent without measuring the dose. No results can be accepted as exact, especially in diagnosis, without a test of current-intensity. The difficulty was that our manufacturers were not able to give us a reliable "dead-beat" instrument at a suitable price. Several galvanometers are now offered; one of the surest of which no doubt is the Edelman, the price of which, however, is high. Mr. Flemming, of this city, makes one, after the pattern of Hirschmann, which he has had carefully tested at the Franklin Institute, and which he has found correct. It is now in use at the University Hospital, where it gives satisfaction. It is easily read, because of the vertical position of the needle, and is not an expensive instrument. It is not perfectly "dead-beat," and requires shunting by a system of pegs, which are its only disadvantages. A simple reference to Ohm's law demonstrates the use of this instrument. With a number of cells representing about 20 volts and a human arm, which has probably 2500 ohms resistance, we obtain, by dividing the force by the resistance, $\frac{20}{2500}$, which equals $\frac{1}{125}$ of an ampère, which is 8 milliampères—as shown on the dial of the instrument.

ORIGINAL COMMUNICATIONS.

REMOVAL OF THE UTERINE APPENDAGES.

Read before the Philadelphia County Medical Society, October 22, 1885,

BY WILLIAM H. PARISH, M.D.,
Professor of Anatomy at the Woman's Medical College of Philadelphia.

THE different conditions for which removal of the ovaries alone, or of ovaries and tubes, has been resorted to—most of which I shall advocate as warranting the operation, but in reference to some of which I shall raise a word of caution, if not of protest—may be classed under the following heads:

1. Diseases of the uterus.

2. Diseases of the tubes.
3. Diseases of the ovaries.
4. Disturbances of the general system, but especially of the nervous system.

Let us consider the last division first. It has long been an established fact that manifestations of abnormal nervous phenomena almost invariably are most marked at the menstrual epoch. Between such manifestations and the female sexual apparatus there is a close bond of sympathy. At the time of ovulation, the despondent are often most depressed, the irritable are most excited, and the hysterical, the epileptic, the maniacal, and the hypochondriacal insane each, usually, present in their most typical forms the evidences of their diseases. With them the congestion and hyperæsthesia pertaining to ovulation seem still further to unhinge the disordered nervous system. Undoubtedly, the process of ovulation does modify and usually aggravates functional or organic perturbation of the nervous system, and there can be no question but that hysteria, hystero-epilepsy, true epilepsy, or insanity may be determined or may be perpetuated by disturbed ovulation.

The removal of the ovaries, however, cannot be considered justifiable merely because abnormal nervous phenomena are most marked at the time of ovulation, even though the nervous disease is of as severe a type as epilepsy or insanity. It should be shown—at least there should be the strongest reason for believing—that the epilepsy or insanity is directly dependent upon the ovulation. The mere aggravation of the symptoms at the menstrual epoch is far from being a sufficient proof that ovulation has determined or is perpetuating the nervous disease. When ovulation merely aggravates the disease, the abnormal nervous phenomena will appear at the intermenstrual periods, and the exciting causes will be numerous and varied: anger, excitement, fatigue, indigestion,—one or more,—will awaken the attacks. If, however, epilepsy or insanity appear only at the menstrual periods, and not between those epochs, and this has been observed for months, and the periodical return has resisted other well-directed remedies, and there exist, as is usually the case, other evidences of disturbed ovulation, then there is, to my mind, a sufficient warrant for the belief that ovulation has originated the epilepsy or the insanity, and is perpetuating it. In such cases the disease will become more and more firmly established as time passes, and eventually will not be limited to the ovulation period.

Such cases are doubtless very rare; but they do exist. And in such, after having failed to secure relief in other ways, the removal of the ovaries is an obligation resting heavily upon the medical attendant. In such cases experience has shown that to stop ovulation is to stop the epilepsy or the recurrent insanity, for there are on record a few cases in which the disease has been apparently permanently cured by the removal of the ovaries, and the accomplishment of—to use Battey's words—"the great nervous revolution which ordinarily accompanies the climacteric."

I will go a little further in reference to these two most grave diseases, epilepsy and insanity, and claim that there are a few cases in which the uterine appendages should be removed, even though intermenstrual epilepsy or insanity exist. I refer to cases in which the type changes at the period of ovulation so as to present at that time—and only at that time—mania or homicidal tendencies. When an epileptic or an insane woman is harmless during the intermenstrual period and becomes a maniac or prospective homicide during the period of ovulation, the indication, amounting to an obligation, is to stop ovulation by the removal of the ovaries and tubes, other remedies having been duly tried. By so doing, one may prevent the recurrence of mania and of the homicidal insanity. In most instances, when the symptoms have shown the dependence of epilepsy or of insanity "upon ovaries viciously performing their functions," the ovaries at the time of opening the abdomen have presented evidences of organic abnormality, though such abnormal condition may not have been ascertainable by any examination prior to the performance of laparotomy.

Hystero-epilepsy is undoubtedly dependent largely upon an irritation of the nervous system reflected from the ovaries, especially at the menstrual nisus. But hystero-epilepsy is of much less serious nature than epilepsy or insanity, and is more amenable to treatment by means which in themselves bring no risk to the patient. Experience has shown that this

disease usually disappears in time, under well-directed treatment of mind and body. The hystero-epileptic, generally, in a few years becomes a useful woman, and possibly a mother. It is true she often transmits her nervous temperament, her nervous enfeeblement, to her offspring; but this fact does not justify the surgeon in rendering child-bearing impossible. While in some minds the removal of the ovaries may be justifiable in the confirmed epileptic or in the confirmed insane, in order to prevent offspring, yet there can be no question as to the indefensibility, if not criminality, of performing this operation with such a view in a hystero-epileptic.

Hystero-epilepsy, however, may be but one of several symptoms resulting from established lesions of the uterine appendages. In such a case Battey's operation is possibly demanded, because of otherwise incurable pelvic disease. The existence of hystero-epilepsy, then, does not of itself warrant the removal of the uterine appendages; and, on the contrary, its existence does not contraindicate the operation when other and sufficient indications exist for its performance.

In reference to the still less serious disease, hysteria, the unanimous opinion of prominent gynæcological surgeons, as shown in their writings, is that the disease, absolutely, does not justify Battey's operation; nor did Battey intend that his operation should be performed because of hysteria alone. Battey states very positively, also, that the operation should not be resorted to in the treatment of uncomplicated nymphomania, for the removal of the ovaries would not prove curative, not even palliative, of that condition, just as their removal does not lessen the normal sexual desire.

There are other systemic reflexes of ovarian origin which occasionally disturb the health to such an extent as to warrant the removal of tubes and ovaries. When invalidism has been established for years by reason of a nervous exhaustion dependent upon ovarian reflexes; when anorexia and persistent vomiting; when functional cardiac disturbance and enfeebled blood-circulation; when wakefulness and reflected neuralgias,—have established an invalidism that has resisted for years the most skilfully directed remedies within the patient's reach; when, as a result, the establishment of some fatal disease is pending,—then the removal of the ovaries and tubes will probably supplant invalidism and impending fatal disease with health and probably long life. Such symptoms justified, in Battey's mind, the performance of his operation, and his experience, with that of other surgeons, has proved the correctness of his *a priori* reasoning.

Careful examination, microscopically as well as macroscopically, has shown that, where ovaries have been removed by reason of serious failure of health dependent upon ovarian disturbance, the ovaries have not been normal, but have presented lesions that had seriously crippled their functions. It is, however, in reference to the performance of Battey's operation in the treatment of mental and neurotic diseases that it is necessary to raise a voice of caution and of protest. Let any one consult the reports of the operations for such conditions, and he cannot avoid the conclusion that this operation has in a number of instances been performed when neither the nature of the symptoms nor the benefits secured justified the procedure. It is to be expected that even able and conscientious surgeons will fall at times into errors when resorting to new surgical procedures; yet in some reported cases the operators have been blinded to the best interests of the patient either by reason of too great enthusiasm for abdominal surgery or by reason of too great, and hence unworthy, ambition for personal advancement. In the selection of a case for the operation one must exercise his most conscientious and most intelligent judgment. In reference to this particular resort to Battey's operation the pendulum has doubtless gone too far in the direction of surgical interference; yet to claim that the operation is never indicated in nervous or mental disorders is but swinging the pendulum too far to the other extreme. That some operators have removed the uterine appendages unwarrantably must not lead the physician to the conclusion that the operation is never warranted. In this matter, as in others, the general practitioner, as far as opportunity permits, must acquaint himself with the literature involved, and be prepared to give a fair and unbiassed opinion, so that while protecting his patient from the performance of an unnecessary surgical operation he may not stand in the way of the adoption of the only measure, in some cases, that

can restore health. The field for Battey's operation in psycho-neurotic diseases is certainly very limited. In a given case it is extremely difficult to determine whether the necessity exists for the operation or not. There are no hard and fast rules to be applied in endeavoring to reach a conclusion, and each case must be judged according to its own phenomena. In such cases Battey's operation must not be hastily selected: it can be justifiable only after numerous approved remedies have failed.

I do not intend to discuss those enlargements of the ovary, usually cystic, rarely solid, which lead to what by common consent is known as ovariotomy, but will briefly speak of those changes in the ovaries for which Battey's operation has been resorted to. Oöphoritis and peri-oöphoritis are the two processes which in most cases underlie the morbid anatomy of the ovaries. Acute oöphoritis rarely occurs except as a part of a pelvic inflammation in which either the pelvic peritoneum or pelvic cellular tissue is largely involved. The ovaritis is often masked by the more general pelvic inflammation. Such acute inflammation does not often call for removal of the ovaries, yet occasionally an abscess develops in an ovary, the surroundings of the organ being such that the abscess cannot be safely emptied without a laparotomy, and then the only rational (as it is the safest) method is the removal of the diseased ovary. An abscess of the ovary is the most dangerous form of pelvic abscess, for it is very apt to establish fatal peritonitis by rupturing into the peritoneal cavity, unless fortunately the pelvic tissues have been so matted together as to protect the peritoneum. The removal by laparotomy of an ovary containing an abscess causes the patient to spring almost immediately into a condition of health. Inflammation of the ovary and its surroundings may produce such changes within the ovary or on its external surface as, by reason of pain and numerous reflexes, to lead to invalidism of a permanent character unless the ovary is removed. Under inflammatory action this organ becomes enlarged and is displaced, usually posterior to the uterus, and becomes adherent to it. The ovarian parenchyma becomes so changed as to render the organ's function difficult or impracticable, and painful in either case. Inflammatory lymph-deposits may form over the periphery of the ovary so as to cramp and imprison the organ, and effectually to prevent the escape of the ova even if they should become matured. The tubes are apt to participate in the morbid process and to contribute to the local and systemic disturbances. The oöphoritis or peri-oöphoritis may have originated in an injury, in syphilis, in puerperal inflammation of septic character (frequently after abortion), or it may be after labor at any period. They are frequently sequels of gonorrhœa, and more rarely of an exanthem or of rheumatism. They may be acute in their earlier phenomena, or they may develop stealthily and not be recognized until local changes have become far advanced. It is true that the great majority of such cases, under judicious management and favorable circumstances, recover to such an extent as to place the performance of Battey's operation out of the question; yet there occur certain cases in which, by reason either of dyscrasia, mismanagement, or unavoidable errors in occupation on the part of the patient, the change in the ovaries and their surroundings becomes permanently established. In such cases invalidism becomes fixed throughout the years during which ovulation continues. Pain during and between the menstrual period becomes a prominent and distressing symptom. Locomotion becomes painful, the ordinary avocations of life cannot be followed, opiates are resorted to, micturition is interfered with, the nervous system suffers, and convulsive manifestations may appear. The prolonged interference with rest, sleep, exercise, and nutrition, and the resort to opiates eventually, lead to the development of anæmia and, later on, to probably fatal cardiac, or pulmonary, disease. Doubtless many members of this Society have seen such patients. In such is not Battey's operation, with its probably favorable result, to be preferred to years of invalidism and to the possible occurrence of an induced fatal disease? Must such a patient be doomed to physical and mental suffering? Must she be left to a life of uselessness and of invalidism? Here, too, in the selection of a case for operation, the surgeon must exercise that intelligence which comes from a faithful study of the subject, and he should be conscientious as well as skilful. In a much smaller number of cases the ovaries have been removed by reason of serious symptoms dependent upon a

degeneration in which the ovarian parenchyma seems to have disappeared almost entirely and numerous minute cysts formed. Rarely a condition of cirrhosis of the ovary has been the morbid change. Occasionally a hernia into the inguinal or femoral canal, into the sciatic or thyroid foramen, or by the side of the vagina, has necessitated its removal. Prolapse of the ovary, usually posterior to the uterus, sometimes into the utero-vesical pouch, has seemed to be productive of grave and obstinate symptoms in some instances, and has led to removal of the organ.

Mr. Tait has popularized the removal of the Fallopian tubes for diseased conditions of the tubes themselves. The alterations of the tubes for which their removal has been most frequently resorted to are hydrosalpinx, or accumulation of serum, pyosalpinx, or accumulation of pus, and hæmatosalpinx, or accumulation of blood within the tubes. I have mentioned these conditions in the order of their relative frequency. In either case both extremities of the tube become occluded, and distention has followed, often to the size and shape of a distended piece of intestine, in rare instances to the extent of containing several pounds of fluid.

It has been said that "all the diseased tubes must go to Birmingham;" but Mr. Tait exhibits the tubes he has removed, and also publishes his cases with such data that the most sceptical cannot but be convinced, both as to the much greater frequency of the morbid conditions than was suspected a few years ago, and also as to the advantages of removal.

Occlusion and distention of the tube result usually from a salpingitis itself arising from causes similar in character to those producing ovaritis, the most frequent of which is gonorrhœa. Salpingitis and ovaritis are apt to be associated, and either or both may be but a part of a general pelvic inflammation. Next to gonorrhœa, extension of septic endometritis is the most frequent cause of the salpingitis which precedes the occlusion and distention. The distention may, however, be dependent upon congenital malformation of the tube. The pathological condition of the tube not infrequently leads to permanent loss of health, or, as in the case of pyosalpinx, to fatal peritonitis from rupture of the tube and the escape of pus into the peritoneal cavity. It seems quite certain, from the observations of Mr. Tait, that in some cases of recurring pelvic inflammation the exciting cause is the rupture of a distended tube. Occasionally the tube may empty itself into the uterus, especially if the condition is that of hydrosalpinx. This fact explains the occasional sudden escape of fluid, usually serous, sometimes purulent or bloody, from the vagina.

The symptoms resulting from salpingitis, with occlusion and distention, are very similar to those produced by oöphoritis and peri-oöphoritis. In pyosalpinx the prognosis, both as to life and as to duration of the disease, is more unfavorable than in most cases of inflammation of the ovary, and ranking with ovarian abscess as to associated dangers. The only certain relief for occlusion with distention of the tube is in the removal of the tube. Amelioration of symptoms occurs when the fluid escapes into the uterus, but reaccumulation may take place from time to time, and symptoms may disappear only to reappear probably at short intervals, until invalidism becomes established.

Prior to the performance of laparotomy the diagnosis of diseased ovaries and tubes must frequently rest upon the symptoms alone.

In some cases one cannot by any method of physical examination determine the condition of ovaries and tubes. An exploratory incision through the abdominal wall then becomes essential to the completion of the diagnosis. A simple exploratory incision brings with it exceeding little risk to the patient. Still, in many instances an enlarged, displaced, or adherent ovary can be recognized as such by a careful bimanual examination under ether, and a distended tube can be recognized, especially through the rectum, as an elongated, sometimes fluctuating, tumor. Dr. Lusk reports that in one instance he mistook, in such an examination, an adherent and distended intestine for a distended tube. A laparotomy disclosed the error. His case illustrates the difficulties of diagnosis. Even if the physical examination should not determine the existence of an abnormality of ovaries or of tubes, and yet the symptoms are grave and intractable and point to pelvic disease, an exploratory abdominal incision is indicated. With one or two fingers introduced into the abdominal cavity, the condition of the uterine appendages can be ascertained without ma-

terial risk to the patient. In not a few instances, to wait until one can by ordinary methods of examination determine ovarian or tubal disease will be merely waiting for the abnormality to become so decided as to render surgical interference extremely hazardous or to be leaving the patient go unrelieved. In many cases the diagnosis is easy without exploratory laparotomy; in some cases a positive diagnosis is impossible without it.

When a Fallopian pregnancy has resulted in rupture of the tube, the indication is to make an incision through the linea alba, to ligature and to remove the affected tube, to control bleeding, to clean the peritoneum of blood, and to remove the fœtus. The fact that a few patients recover after symptoms of rupture of the tube in extra-uterine pregnancy should not deter from the performance of this operation. It seems quite certain that the number of such recoveries is very small compared with the number of mothers who die because of the rupture, although statistics are scarcely attainable. Autopsies and the experiences of a few surgeons show that the operation of ligaturing and removing the tube after rupture in Fallopian pregnancy would usually be a very simple procedure. At the period of pregnancy when rupture most frequently takes place—that is, at the second month—the cyst has not commonly formed adhesions, and there is no difficulty in stopping, and in avoiding, hemorrhage. Mr. Tait has operated in nine such cases,—*i.e.*, after rupture of the tube,—with only one death. It is to be hoped that American physicians will not continue to let such patients die without resort to the only rational and now well-established measure of relief.

To arrive at some conclusion as to the results following removal of the uterine appendages in the different diseases discussed, we must consider the prognosis in reference not only to the dangers attending the operation, but also as to the influence upon the disease or the symptoms for the relief of which the operation was performed.

When the appendages are removed because of reflex disturbances, as in epilepsy, there is almost no risk of death following the operation if the ovaries and tubes be free from adhesions. The more nearly normal the appendages, the less the danger of death after operation. Mr. Tait has operated six times for epilepsy, with no deaths; and he states that death ought never to follow such operations, the appendages and their surroundings being nearly normal in character. The operation, under such circumstances, is simple and quite safe in capable hands.

A few reported cases of operation for epilepsy and for mania seem to show the disease cured; in a larger number decided benefit followed; in others no relief. It is too soon to draw conclusions from the bare statistics of such cases, and I shall not submit a statistical statement. Some cases are apparently cured for a while, and the disease then returns; others seem but slightly or not at all benefited for months, and then greatly improve and seem to be recovering. The published reports in most cases do not give the remote effects upon the diseases. I draw, however, the impression that, in a very few judiciously selected cases, a cure of epilepsy or of insanity will follow Battey's operation.

A much larger number of operations have been performed because of inflammation of ovaries and tubes, including under this head cases of distention of tubes with pus, blood, or serum. Operations performed for these conditions bring risks to life varying greatly with the condition of the appendages and their surroundings. The dangers are relatively great when extensive, dense, and vascular adhesions exist, or when pus is present, as in pyosalpinx and in ovarian abscess, as in removal the pus may escape into the peritoneal cavity and fatal peritonitis result. However, Mr. Tait has operated in two hundred and one cases for inflammatory disease, with only ten deaths: a mortality of about five per cent.

The results secured by this skilful surgeon, though more favorable than those of most other operators, yet present, as nearly as can be obtained, the mortality inseparable from the operation. In studying less favorable statistics, the degree of lack of surgical skill becomes a larger element of uncertainty, and it is more difficult to determine to what extent the less favorable result is dependent upon the essential nature of the operation itself.

Hegar states that the mortality following his operations has been about sixteen per cent., and gives the mortality of other operators with whom he is acquainted at thirty-two per cent.

Dr. Mundé has tabulated one hundred and twenty operations by different surgeons, with a mortality of about twenty-two per cent.

When the appendages have been removed because of extensive disease, as occlusion and distention of the tubes, oöphoritis and peri-oöphoritis, with displacement of the ovaries and matting together of the appendages and surrounding structures, ovarian abscess, or Fallopian pregnancy, the effect upon the symptoms has been in nearly all cases very satisfactory, the patient being restored to good health. The benefit, however, is not always immediate, and it may be several months before the symptoms disappear. In some instances the local pains continue indefinitely. In such cases inflammatory action may remain in the pelvis after the removal of the appendages. The pelvic peritonitis or cellulitis so frequently accompanying ovaritis or salpingitis may continue in a chronic form, though usually such inflammation gradually and entirely subsides after the fluxion and hyperæsthesia of ovulation have ceased to recur. In some such unfavorable cases a pelvic peritonitis may have arisen because of the operation, and may occasion a continuance of pelvic distress.

The treatment of uterine myomata very frequently taxes to the greatest extent the skill and perseverance of the physician and surgeon. The most urgent and most distressing symptoms usually are hemorrhage and those due to pressure. The pressure-symptoms, though modified often by the location of the tumor, are usually in proportion to the size and weight of the myoma. The congestion incident to ovulation is usually the element that causes and aggravates the hemorrhage, that determines and stimulates the increase in size and in weight. When the natural menopause has become established, the periodical congestion of ovulation does not occur, and hemorrhage usually disappears, the tumor shrinks, and the pressure-symptoms become less pronounced. It is true such results do not always follow the natural menopause, but they usually do, and are to be expected, excepting in very large tumors probably, and in those of fibro-cystic character. The influence exerted by the natural menopause on uterine myomata led to the removal of the adnexa with the view of establishing an artificial or produced menopause. The removal of the ovaries and tubes for such conditions has been frequently resorted to during the last few years, and doubtless will grow in favor with the profession as the results become more definitely determined. Of course, there are very many patients in whom the symptoms are slight, and the question of the performance of the operation under consideration does not arise. That the mortality dependent upon uterine fibroid tumors, when not interfered with, is extremely low must not too quickly lead one to the rejection of this operation, though somewhat dangerous as to its immediate results, and though it is one rendering sterility certain. An operation which, while it brings a somewhat increased risk of immediate death, brings also great probability that health and a useful life will be substituted for years of illness and relative uselessness, becomes, I take it, not merely a matter of option, but a matter of duty, provided there is no less dangerous method of relief. The adnexa should not be removed either when the tumor or tumors can be removed without great risk, with the écraseur, by traction, and by enucleation, or when the hemorrhage and pressure-symptoms can be sufficiently controlled or ameliorated by other recognized measures.

In the *British Medical Journal* for January 31, 1885, Mr. Tait states that he has removed the appendages for uterine myomata ninety-nine times, with seven deaths: a mortality of about seven per cent.

Mr. Keith, in the same issue of that journal, states that he has removed both ovaries twelve times for myomata, with no deaths. Mr. Keith states that in only one of the twelve cases has menstruation continued, and in that case a portion of one ovary was unavoidably left. He also states that of upwards of sixty cases in which he removed both ovaries for disease, in only one did menstruation return regularly. The cessation of menstruation and the checking of hemorrhage occur, with very few exceptions, after removal of the appendages for myoma. Mr. Tait claims that this result will probably not be secured unless the tubes are also removed, as he believes that the tubes are more concerned in determining menstruation than the ovaries. The difficulties of the operation for myoma vary greatly in different instances, according to the position

of the ovaries, to the twisting of the tumor, and according to adhesions or the approximation of the ovaries to the tumors. These conditions cannot be determined until after the abdominal incision has been made. In some instances of attempted removal of the appendages, it has been found necessary to remove the uterus because of injury done to it during the operation; and in other instances it has been impossible to find the ovaries, they being embedded in the mass of myomata.

Compared with hysterectomy, or the supravaginal removal of the uterus, the result has been greatly in favor of the removal of the appendages. Yet Mr. Keith has reported thirty-eight hysterectomies with only three deaths: a mortality of about eight per cent. But he has removed the appendages for myoma twelve times, with no mortality. Mr. Tait has performed hysterectomy fifty-four times, with nineteen deaths: a mortality of over thirty-five per cent.—to be contrasted with his mortality of seven per cent. after removal of appendages ninety-nine times for myoma. He speaks of hysterectomy as a terrible operation.

The enucleation of large submucous or interstitial myomata is a grave operation, and, were sufficiently extensive statistics ascertainable, a very large mortality would doubtless be presented dependent upon it. It would be better, in some cases in which the symptoms seem to demand enucleation of such large growths, to resort to removal of the appendages, as being less dangerous and more likely to stop permanently the hemorrhage.

In very large tumors and in those of fibro-cystic character the removal of the ovaries seems to be of little, if any, service.

Dr. Battey, in his earlier operations, removed the ovaries through an incision in the vagina. More recently he has resorted to an incision along the linea alba. Unless one is positive that the ovaries are not adherent and not materially enlarged, the incision should not be made through the vagina; and, as the exact condition of the ovaries can rarely be ascertained with certainty before operation, it is best under all circumstances to perform a laparotomy, instead of operating through the vagina, when removal of the appendages is aimed at. It has been found that adherent ovaries and tubes cannot be removed easily and entirely through the vagina, and the operator cannot with certainty control the bleeding which accompanies the tearing up of adhesions.

After laparotomy, the operation of removal is very simple if the ovaries and tubes are nearly normal and are free from adhesions. The operation becomes extremely difficult when the appendages are matted together and are adherent to the bottom of the pelvis. In the hands of surgeons inexperienced in the details of abdominal surgery, the mortality attending removal of the appendages must continue high.

It adds but little, if at all, to the difficulties of the operation, to remove tubes and ovaries together; and as Mr. Tait believes, from his observations, that the tubes are important factors in determining menstruation and in determining what have been considered symptoms of ovarian disease, it becomes prudent to remove the tube with the ovary. It is now generally accepted that both ovaries should be removed, even though the symptoms have pointed to a diseased condition of one side only. In several cases in which an apparently healthy or nearly healthy ovary had been left, the symptoms, after disappearing from the side from which the ovary had been removed, had appeared and persisted on the side of the remaining ovary, and a resort to a second operation for its removal was necessitated.

Proper antiseptic precautions during the operation should be observed; *i.e.*, the operator should have clean hands, clean instruments, clean sponges, and clean ligatures and sutures. Only one assistant directly assisting in the operation is necessary. Corrosive sublimate may be used to render everything aseptic excepting edged tools. The spray has been discarded by most surgeons.

One should not render a woman sterile excepting in the relief of some grave condition. Objection to this operation based upon the fact that sterility is rendered perpetual is in many instances of little weight, as often sterility has already become established by the very condition demanding the removal of the appendages. It seems to be the general testimony that the sexual desire is not usually materially influenced by the operation. The sexual act, often previously painful or impossible, may, after recovery from the operation, be accomplished with entire absence of pain.

In a few instances excessive sexual desire has been noticed after removal of the ovaries: in such cases there have been organic changes in the uterus and its surroundings, and, these being remedied by the operation, the abnormal sexual desire dependent on these organic changes has subsided. After removal of the ovaries the woman's appearance becomes none the less feminine, and the only change it undergoes is that which follows restoration to health. There is no change in the voice.

There are a very few recorded cases in which maniacal or hypochondriacal insanity has developed after the operation,—whether because of the operation or not it is impossible at present to determine.

REPORT ON OPHTHALMOLOGY.

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THE INFLUENCE OF LIGHT ON THE RETINAL CELLS.

DR. TH. ENGELMANN has contributed (*Archiv Gesammte Physiologie*) some researches on the influence of light upon the cones and pigmented epithelial cells of the retina. The inner segments of the cones become shorter under the influence of light, but elongated in the dark. When the inner part contains a so-called ellipsoid this does not (or comparatively little) change in form. This is also true of the outer segments of the cones and the rods. It seems that only that part of the inner segments of the cones is actively movable which most resembles protoplasma and which lies between the membrana limitans externa and the outer segment. In this movement the moving part remains always in continuity with its cell-body in the outer granular layer. When it becomes shortened it gains in thickness. When it is elongated it becomes thinner in such a manner that probably no change in volume takes place. In this it corresponds with contractile protoplasma or muscular fibres. The absolute and the relative amount of change in length differ in different animals, and also in the same eye under the same conditions, being sometimes longer, sometimes shorter. The rapidity of the movement is such that in frogs (which have been kept in the dark) the cones previously stretched *ad maximum* after a few minutes of light-exposure are contracted *ad minimum*. The rapidity of movement is evidently of the same order as that of many forms of contractile protoplasma,—*e.g.*, of the pigmented cells of the skin, the contractile cells of the corneal epithelium, and especially the pigment-granules in the protoplasmic offsets of the pigmented cells of the same animal. The pigmented retinal cells undergo essentially the same movements as the cones, but they do not always contract or elongate with the cones. The cones may be contracted *ad maximum* while the pigment-granules have not changed their position, and *vice versa*. It seems that all parts of the visible spectrum can induce these changes. Whether ultra red or ultra violet can do the same is not yet determined. If one eye of a frog be exposed to the light and the other kept in darkness, the cones and pigment-cells in each will be found contracted *ad maximum*,—the only difference in the two being that in the exposed eye the outer segments of the rods were perfectly bleached, while in the unexposed eye they were as intensely tinted as if the frog had not been exposed to light. By repeating the experiments, it was found that this photo-mechanical operation of the pigmented cells and cones takes place with equal strength and at the same time in both eyes when one is exposed to the light, and that when shielded from the light both resume their former position. This, however, occurs only if the brain is uninjured. If this be destroyed, the retinal changes are confined to one eye. The author, therefore, thinks that this reaction must be brought about by nervous connections, and this is through the optic nerves, which, therefore, must contain not only centripetal fibres, but also centrifugal fibres, which act as motor nerves to the cones and pigmented cells. It is possible that in man the fibres of the anterior commissure of the chiasm may act as accessory conductors. Experiments on frogs showed, further, that it is possible, by excluding light from both eyes and exposing the back and posterior extremities to sunlight, to induce the contraction of the rods and pigmented cells as if struck directly by the light. Of course the outer segments of the rods were intensely tinted. One thing is certain, that it is possible to cause a reflex movement in the cones and pigment epithelial cells by the irritation of distant regions of the

body. Finally, the author shows that light is not the only agent which will induce these movements. The same effect as results from light may be induced by tetanizing frogs by strychnia. Curare did not diminish the reaction, nor induce it.—*American Journal of Ophthalmology*, February, 1885.

EFFECT OF COCAINE ON THE POSITION OF THE EYEBALL.

Dr. Baas has observed that after the use of cocaine the axis of the eyeball is directed directly forward. The eye seems involuntarily to assume the primary position. The patient is, however, able to change the position at will. In sleep and general narcosis, the eye has a tendency to rotate directly upward.—*Klinische Monatsblätter*, October, 1885.

THE EYES OF IDIOTS.

Dr. Schleich reports the results of the examination of one hundred and fifty-six idiots. Anomalies of the eye-muscles were seen in ten per cent. of the cases. There was one case of congenital ptosis, ten cases of strabismus concomitans, five cases of nystagmus (one of these had persistent hyaloid artery, and one, a microcephalic patient, had a coloboma of the optic-nerve sheath). The crystalline lens was clear in all the cases. The refraction examination showed a predominance of hypermetropia.—*Klinische Monatsblätter*, October, 1885.

A NEW OPERATIVE PROCEDURE FOR UNRIPE CATARACTS.

Wicherkiewiez reports the following method by which unripe cataracts can be extracted without awaiting the complete clouding of the lens. The danger in such cases is that a large amount of lens-substance is likely to remain within the eye in spite of every effort to remove it. The procedure of Foerster for the artificial ripening of the cataract, according to Wichenkiewiez, when the massage is lightly performed has little or no effect, while if energetically performed it may set up a great deal of irritation, bursting of the zonula, etc. Wicherkiewiez's idea is to remove as much as possible of the lens in the ordinary way, and then to wash out the remainder with an aseptic solution. He has had constructed for this purpose a glass receptacle shaped like a retort. The beak of the instrument terminates in a silver end of a size suitable for entering the anterior chamber; the flask has a vent over which the thumb can be placed and thus the atmospheric pressure regulated. The apparatus is filled with a solution of boracic acid, the end introduced into the anterior chamber, and the cortical washed out from underneath the iris into the pupillary space and into the wound. The author has operated eighteen times in this way, but considers this number too small to tabulate, but thinks the procedure will at least prove an advance in the antisepsis of the anterior chamber.—*Klinische Monatsblätter*, November, 1885.

ADHESIVE STRIPS OF GELATIN FOR CATARACT-EXTRACTIONS.

Galezowski, who advocates a corneal cut in cataract-extraction, suggests the use of gelatin adhesive strips for the closure of the wound. Convinced that corneal suppuration in many cases, at least, is due to infection with micro-organisms, and having operated with antiseptic spray and bandages, he conceived the idea that if the wound were sealed by an impervious covering the infection would be prevented. He employs for this purpose very smooth and soft gelatin strips about one-half millimetre thick. This strip contains a small amount of corrosive sublimate, and is moistened with a cocaine solution that it may be more easily applied. The strip is dipped in hot water and applied with a forceps to the wound, the lids closed over it, and a bandage applied. The strip melts gradually, and at the end of eight to twelve hours has disappeared. The complete coaptation of the parts takes place rapidly, and Galezowski has thus been enabled to leave the eye unbandaged at the end of the fourth or fifth day. He has employed the strip thus far in nineteen cases of extraction, in an operation for keratoconus, in an iridectomy for ulcer of the cornea. One of the cataract cases was complicated with suppuration of the lachrymal sac. At the desire of the patient, the extraction was made without previously curing the sac-inflammation. The case did so well under the gelatin strip that the bandage was removed on the fourth day.—*Centralblatt für Augenheilkunde*, November, 1885.

NEW INSTRUMENTS.

Agnew's Bident.—This is essentially two cataract-needles six-eighths of an inch

in length, joined together at one end, making a fork-shaped instrument,—the prongs, represented by the needles, being about one-eighth of an inch apart. The instrument has been devised for the removal of lenses dislocated into the vitreous. The needles, in the grasp of a needle-holder, are entered into the vitreous posterior to the lens, and by rotation the lens is brought forward into the pupillary space and the counter-puncture then made through the sclerotic. The lens, resting on the prongs of the bident, can be removed through the corneal section.—*Trans. of the American Ophthalmological Society*, 1885.

Discission Instrument.—Heyl describes an angular needle for operating on secondary cataracts. It is, essentially, the Hays needle bent at an angle, the principle being that, instead of acting by a pure lever-motion, the movement which rotates the needle communicates a cutting-motion at the same time. Practical experience has confirmed the utility of the instrument. —*American Journal of the Medical Sciences*, October, 1885.

An Electric-Light Ophthalmoscope.—Dr. Dennett has described an instrument in which the lamp (of about three-quarters candle-power) is introduced into the handle of the ophthalmoscope. This handle is hollow, and the light, proceeding through the tube, strikes the mirror at right angles, and is thus reflected into the patient's eye. —*Transactions of the American Ophthalmological Society*, 1885.

THE GONOCOCCUS OF NEISSER.

The micro-organism discovered by Neisser in gonorrhœal discharge is the subject of a monograph by Dr. Ernest Bumm. The following are some of the results based upon the examination of vaginal discharges and the conjunctivæ of newborn children. In the puerperal state an enormous development of the coccus takes place, more especially in women with chronic cervical gonorrhœa, which generally gives rise to so little disturbance that its nature is recognizable only by the microscope. In the conjunctiva the coccus is generally associated with other forms of micro-organisms. In simple conjunctival catarrh the coccus is absent. The coccus cannot force its way through an intact pavement epithelium. When a tissue in which both pavement and cylindrical epithelium exist together is infected, the line of demarcation between the two is marked. Study of the conjunctiva shows that the coccus forces its way through the epithelium into the underlying tissues; at the same time large numbers of white blood-corpuscles escape from the enlarged capillaries, and the epithelium is to a large extent destroyed. The cocci increase in numbers, and the second or suppurating stage is reached. On the fourth day the regeneration of the epithelium begins, and it is completed in about ten or twelve days. Dr. Bumm has succeeded in cultivating the coccus, and from a pure culture inoculated the healthy urethra of a woman, with the result of developing a typical gonorrhœal urethritis. Inoculation with gonorrhœal discharge freed from the coccus gave a negative result.—*Centralblatt f. Augenheilkunde*, November, 1885.

MYXO-SARCOMA OF THE OPTIC NERVE.

Prudden reports the following case. Carrie L., æt. 12, of good health and without history of constitutional taint, presents herself with exophthalmus of the left eye. The conjunctiva is hypertrophied and red, the cornea hazy. The pupil, moderately dilated, responds very little to light. A tumor can be felt behind the eyeball. Ophthalmoscopic examination shows a pink reflex, retinal vessels much diminished in size, optic disk very white. There is no perception of light. According to the history, the tumor has been growing for at least six years. The tumor was removed with the eyeball. During the operation the sheath, which seemed to be distended with fluid, was punctured, and a yellowish serum escaped. The tumor was pulled forward in order to remove every vestige of it. Troublesome hemorrhage followed, perhaps from the recession of the artery. The patient vomited a good deal, and this was accompanied by fresh flow of blood. The hemorrhage was finally stopped, but, after a lapse of five hours, set in with such violence as almost to lead to a fatal result. The tumor proved to be a myxo-sarcoma.—*Archives of Ophthalmology*, 1885.

BLINDNESS FOLLOWING ATTEMPTED TOOTH-EXTRACTION.

Swan Burnett reports the following case. A colored man, æt. 35, was operated on for cataract of the right eye with partial success. The left eye had perfect vision

for ten years later. About this time he went to a dentist for the purpose of having the left upper canine tooth extracted. Persistent but vain efforts were made to remove the tooth. The same evening the left side of the face began to swell, and the eyelids closed over the eye. Fever set in; abscesses formed near the inner canthus, the forehead, and cheek. When the swelling subsided, the eye was blind. Examination showed a white nerve and a number of emptied vessels resembling white lines running over the retina. The appearance of the fundus resembled very closely that seen in atrophy after erysipelas.—*Archives of Ophthalmology*, 1885.

THE ELECTRO-MAGNET IN OPHTHALMIC SURGERY.

The following is extracted from the review of Hirschberg's book on this subject in the *Archives of Ophthalmology*, vol. xiv. p. 426. The instrument used by Hirschberg is a magnetic machine, with zinc-carbon elements in a glass jar holding one litre. He renews the fluid from time to time, and always tests the energy of the current before using it. There is no need of the enormous machines proposed by Voltolini. Voltolini asserts that the click of the iron striking the magnet cannot be heard; but Hirschberg asserts that he has repeatedly heard it. Comparison of the magnetic extraction of iron from the lens with the old method shows that the former offers no special advantages over the latter, except that with the magnet the foreign body never falls into the vitreous. The removal of iron from the vitreous is the most important for magnetic extraction in ophthalmic surgery. The extraction may be made either through a meridional cut in the sclera or by a corneal section after extraction of the lens or after capsulotomy. A piece of iron is small for the vitreous chamber when it weighs from twenty-five to thirty milligrammes, and with such a piece of iron we may obtain perfect success, even at a late date. It is moderately large when it weighs fifty to one hundred and fifty milligrammes, and then only an early operation is likely to be successful. When it weighs from two hundred to five hundred milligrammes, the most prompt extraction cannot restore vision, and even the preservation of the eyeball is doubtful.

It is difficult to define the indications for operating. If we see a patient in the first stage, with a small piece of iron in the vitreous, it is best to operate without delay. If a scleral section must be made, we must etherize the patient,—the pain in removing the foreign body is said to be excruciating,—and choose a spot rather downward and outward than downward and inward. If an equatorial section be made, there is danger of collapse and total destruction. In making the section, a Graefe knife is plunged through the sclera several millimetres deep into the vitreous, and the scleral incision is enlarged to about six millimetres in length. The magnet is then introduced and allowed to remain several seconds, and then withdrawn. The danger of sympathetic ophthalmia is slight after using the magnet.

Hirschberg adds, "If, in the long list of extractions of iron from the vitreous with the magnet which I have performed in the last five years, I have succeeded twice in obtaining excellent vision, once a remnant of vision, and twice in preserving the shape of the ball, the difference in favor of this method will be more marked when I say that in the first ten years of my practice I never succeeded a single time in saving a trace of sight when I attempted the removal of iron from the vitreous by purely mechanical means." Hirschberg also gives an instance of a minute piece of iron being removed from the lens by a magnetized cataract-knife; and, in cases of minute chips in the lens, the effect of magnetized instruments is to be tried before resorting to the magnetic battery.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

CLINIC OF J. M. DA COSTA, M.D.,

Professor of Theory and Practice of Medicine in the Jefferson Medical College, Attending Physician to the Pennsylvania Hospital, etc.

MALARIAL TOXÆMIA—ENLARGED SPLEEN TREATED BY ERGOT.

GENTLEMEN, — The patient before you is one whom you have previously seen. As he is about leaving the hospital, I thought it would be of interest to you to note the progress of the case as well as the results of treatment. He was before you on the 7th day of last month. He is the one who had the enormously-enlarged spleen,—whose system was saturated with

chronic malarial poisoning. He had, as you may recall his history, irregular chills for three months preceding his coming into the wards, on the 21st of last October, and even after his admission he presented at times these irregular evidences of malarial infection. He was treated chiefly with quinine given in amounts not exceeding sixteen grains daily, and occasionally with mercurials to relieve a tendency to constipation, but he did not improve greatly. It is true that the manifestations of malarial poisoning, in so far as the outbreaks of chills were concerned, disappeared, but the enlargement of the spleen was very little influenced; and, in addition to this, I find, in a note made on the 7th of last month, that "he has a sallow skin, yellow-tinged conjunctiva, and his liver is slightly enlarged; and the spleen extends from the sixth rib nearly to the ilium, and horizontally the dulness extends to within three inches of the median line." There was also some dyspnœa, and a trace of albumen in the urine. There was no indication of disorder of the heart. Upon examination of the blood no change was detected in the usual proportion of the white corpuscles, but there was an actual decrease in the red of about one-half. Therefore it was a case of anæmia of splenic origin due to the malarial poison with beginning leucæmia. I decided then to give him ergot,—a plan of treatment I originally employed several years ago and have found very successful. The quinine was reduced to tonic doses of six grains daily, and the fluid extract of ergot was given, a drachm three times a day.

The man has since then steadily improved. His tongue is clean, the lips are of good color, his conjunctivæ are clear, and his bowels are regular. The liver-dulness now has decreased to normal; but what will interest you most is the size of the spleen. The percussion-dulness, which formerly extended across to the ilium, I find this morning is not more than an inch below the border of the ribs; the upper limit of dulness begins on a line drawn two and a half inches below the nipple, at the lower border of the sixth rib, and extends to about two fingers' breadth below the margin of the rib in the left axillary line. Transversely, the dulness does not now begin until about six or seven inches from the median line, so that the spleen has been reduced to nearly its normal conditions. It would be still considered a slightly-enlarged spleen in a person otherwise healthy, but it is only a little larger than normal, and we say that practically the spleen has been restored to its normal size. The temperature throughout has been about normal, except during the chills. The blood was again examined two days ago, and it was found that the proportion of red and white corpuscles had been restored to the normal; in other words, the red corpuscles had doubled in amount.

That the cure in this case may be attributed to the ergot, there can be no doubt. It was not due to the quinine, because that had been given before, and in large doses, without producing the same effect.

How is the ergot best administered? I first began to use it hypodermically, but the patient objected, and finally refused to allow it to be given in this way. He then was given half a drachm thrice daily by the mouth, and in a week the dose was increased to a drachm of a trustworthy fluid extract, and his stomach has borne it well.

I will not say that I prefer the administration by the mouth: hypodermically it acts more quickly, and when I began my observations some years since I used it in this way. But I soon found, especially in children, that the internal method of administration was also efficient, although slower. Therefore I adopted the rule to use ergot hypodermically in adults when a rapid result is desired, and where time is of less importance to give it by the mouth. How does the ergot act? I think by a constringing effect upon the blood-vessels: the spleen being a very vascular organ, the ergot acts upon its blood-vessels, reducing their size. What strikes us here is the interesting physiological fact that, under the action of the ergot upon the spleen, the blood has become normal. We gave him no iron. As his spleen came down in size the blood improved, although since admission he has had none of the remedies which are supposed to act upon the blood and increase the number of red corpuscles.

The patient is about to leave us, and the question now before us is, Shall he continue his treatment? I do not think it really necessary, but he may take the following, chiefly for its strengthening effect:

℞ Cinchonidiæ sulphatis, gr. ij;
Extract. nucis vomicæ, gr. 1/8;
Rhei, gr. j. M.
Ft. pil.

He shall take one of these pills morning and evening. The effect will be tonic, and at the same time the pills will keep the bowels in a soluble condition, and thus prevent anything like abdominal fulness. If he will pay proper attention to his diet, and live in the open air, I believe he will remain in health, to which he is now restored; so that it will not be necessary to continue this treatment for a very long time.

A VERY SEVERE CASE OF CHOREA SUCCESSFULLY TREATED WITH HYOSCYAMINE.

I shall next show you a case which was one of the worst cases of chorea that I have ever seen in this hospital, or, indeed, anywhere else, but there is very little for you to see of the symptoms this morning, the boy has so much improved. The patient I am about to exhibit to you, and whose case I propose to make the subject of some clinical remarks, is a boy about 11 years of age. He has always been pale and weakly, and his friends, when he was brought here, said that he was always a very nervous child. Four weeks before the date when he was admitted (on the 14th of last month) he had an attack of acute rheumatism, which involved all the larger joints of his body. The rheumatism lasted about three weeks, but as it declined choreic symptoms began to be manifested. His hands and arms were first affected, and afterwards his legs.

When admitted, he was actually unable to walk; he was even unable to feed himself: in truth, the poor boy seemed in risk of starvation. He was wretchedly weak and emaciated. He could perform no co-ordinated movements with his arms or legs, and unless there was always somebody about to give him a drink of water and food he would have perished. This was not due to actual want of power in the muscles, but to the impossibility of performing any voluntary act requiring co-ordinated movements; yet when food was placed in his mouth deglutition was readily accomplished. When he came here he could not speak, he could not articulate a word. He could not put out his tongue, although he could open his mouth and move his jaws, but he could not ask for food. His expression was that of an imbecile, and he was reduced to a mere shadow. Indeed, I fear that you will hardly believe me, when you see him now, that he is the same boy whose history you have just heard.

When I first saw him, his arms and legs were constantly moving, both sides being equally affected. No power of grasp existed in his hands, though sensation did not seem impaired. He complained of pain when he was pinched. The patellar reflex was normal, and not exaggerated. No marked change in the electrical reactions was observed. His pupils were very much dilated; his pulse was only fifty per minute, and rather weak; there was a systolic mitral murmur heard at the apex. These are the main points in the case; but allow me to mention one or two more, so as to bring the case fairly before you as he was, before seeing him as he is. These involuntary muscular movements did not continue at night, when he was asleep. His urine has been examined, but neither albumen nor sugar was detected. His bowels tend to constipation. We detected the mitral murmur shortly after admission.

Gentlemen, here was a case of unusually violent chorea. There was general loss of power from want of control over the muscular movements. It seemed that unless we could give this boy rest he must rapidly perish. I have already told you that he was unable to feed himself, or even to express his wants.

The ordinary remedies for chorea act slowly; arsenic, though one of the best of our therapeutic agents for this disorder, acts slowly; it takes time, and the loss of time here might be fatal. I then recalled a case of tremor which I had seen rapidly influenced by hyoscyamine, the active principle of hyoscyamus niger. I concluded to try it here. I ordered him to take one-two-hundredth of a grain to begin with, a decided dose for a boy of his age; but, not finding any marked influence, I concluded that it would be advisable to increase the dose to the one-hundredth of a grain, given three times a day. Now the effect was admirable. From the first few days the boy began to improve, and at this time he had some dryness of the throat and wanted his mouth frequently moistened. He soon became brighter in his mind; he took more interest in what was going on; he moved voluntarily in bed, and tried to help himself

to food. His voice also returned, and he left his bed and began walking around the ward. After this his recovery was rapid and uninterrupted. He has had no other treatment than the hyoscyamine, and he has now so much improved, though he is still somewhat pale, that he may be looked upon as having recovered. He is sitting quietly; he has power over his hands, both in co-ordination and in grasp, although his grasp is still a little feeble. He walks and stands now without falling. His pupils are dilated, although not much.

The systolic apex-murmur persists: it is a chronic mitral regurgitant murmur. In every other respect the boy is nearly well.

Now, there are one or two points of clinical interest to which I would like to call your attention: first, some points which have nothing to do with the treatment; and, secondly, some which bear upon the treatment.

In the first place, this attack of chorea was clearly of rheumatic origin. It came on at the end of an attack of acute rheumatism. It is true that the boy was previously feeble and ill nourished, and that he was regarded as a nervous child; but the association of chorea with rheumatism is too close a one for us to regard it here as a mere coincidence. You can generally trace, in a case of chorea, a strong rheumatic element, either inherited or acquired. Occasionally you will get hold of a case just like this one, which I could easily duplicate from my experience In this form, before the patient has left his bed or his attack of rheumatism is clearly over, the chorea is manifested: which makes the connection still closer. Now, it has been thought that there is an embolic process at work in the smaller blood-vessels of the motor centres in the brain and spinal cord; small vegetations which are formed upon the valves are washed into the arteries supplying the motor tracts, especially the corpora striata, and the subsequent disturbances of nutrition give rise to the irregular, unco-ordinated muscular movements. This is a plausible and ingenious theory; yet I cannot think that it is sufficient to account for all the features of the disease. There must be some want of stability of the motor centres, independent of the coarse lesions resulting from embolism, the evidence of the existence of which, moreover, is not complete, and which is certainly not constant.

You noticed the extraordinary extent to which the manifestations of chorea have been carried in this case. He had no voluntary control over his muscles, and at the same time his mind seemed to suffer: he was almost an idiot. When admitted, his temperature was 98¼°: therefore the attack of rheumatism was over, and these symptoms were not due to a fresh outburst of the rheumatic affection. The want of power in these muscles must also be taken into consideration, as showing a close relation between chorea and paralysis.

Now, coming to the question of treatment, the influence of the hyoscyamine, which was suggested by analogy from the treatment of tremor, was here strikingly manifest. I have told you that the dose was increased from one-two-hundredth of a grain to one-hundredth of a grain without any bad effects; but when he was taking this quantity he complained of some dryness of the throat, although it never was so severe as to require us to reduce the dose again. On the 21st of last month the daily amount was reduced to two granules instead of three. It was finally discontinued two days ago. Now he is perfectly steady and can control his movements; his tongue is clean and he has a good color; he is gaining flesh: indeed, he may be considered as well.

Did the hyoscyamine produce the striking effect, or did the rest in the hospital do it? That rest is good in all and can cure many cases of chorea, is admitted; but the improvement here was too sudden—coming on in three or four days—and too great to be attributed entirely to the good nursing and the food which he received since he was admitted. It is claimed that hyoscyamine is a valuable antispasmodic and exercises a remarkable control over muscular movements; also that with the control of the movements the condition of the muscles is improved and all the functions increased. Even the blood has improved; for, though he is still anæmic, he is not so much so as he was. Within a week after beginning the treatment he was out of bed and walking around, but not so well as at present.

What shall be given further? Will not the condition remain? Not necessarily; for all the irregular muscular movements have ceased. He can take, however, for his anæmia, the elixir of the pyrophos-

phate of iron, a drachm three times a day, and stop the hyoscyamine as having accomplished its purpose.

RHEUMATIC MYOSITIS OF MASSETER MUSCLE.

I will now show you another case of interest. This one you will see at its height before any treatment has had much of an opportunity of influencing it. He occupies Bed No. 2 in the Men's Medical Ward. He states that he had never been subject to acute articular rheumatism. He is 26 years of age. Two years ago, he says, he had a peculiar attack, during which the right cheek was swollen and painful, and he remembers that he was unable to open his mouth: this lasted for one week. He had at that time several bad teeth, and he attributed the attack to them, although the swelled face was not associated with toothache, nor could he find any soreness in the teeth, nor indeed any change in them from what they had been for some time before. He then got well, and had no further trouble with his face until the present illness began.

Four days before admission (he came in on the 8th of the month), he had been exposed to cold, and at once the right cheek became swollen and painful,—in other words, very much the same kind of an attack as that of two years before. When admitted, he could scarcely open his mouth, and could not open it sufficiently to protrude his tongue when requested. The right cheek was tender, swollen, and painful upon pressure. There were points of tenderness at the articulation of the lower jaw and along the ramus of the right side; but the teeth were not tender. Although we found two which were decayed on this side, yet they had given no trouble for a long time. The right masseter muscle was found to be hard, rigid, and painful upon pressure. His temperature was 99°; his urine was 1022, acid, and did not contain albumen.

Now, gentlemen, here we had a very striking case; I speak of it as it was only a few days ago. There was great swelling, hardness, and tenderness of the right side of the face, which has somewhat subsided. He can now open his mouth a little, but complains of pain at the angle of the jaw. The masseter muscle is still rigid, but less so than at the time of his admission. He can now swallow, and the symptoms are passing away.

This case might well introduce an interesting discussion. When he came in, there was nothing to be seen in the mouth, the gums showed no signs of recent inflammation, and no tenderness was evoked upon bringing the jaws forcibly together. He had no distinct fever, but was feverish and restless at first; this has all gone. His tongue can now be slowly protruded; it is not coated. His bowels are regular.

I regarded this case as a peculiar manifestation of acute rheumatism, which here attacked the masseter muscle. This would produce rigidity and the difficulty in mastication already described. The only question in the diagnosis is with regard to the teeth; but I do not think that they have anything to do with it. The attack came on suddenly; it was very marked; and the teeth were not directly affected. I think we must look upon it as a local manifestation of a rheumatic condition of the system.

The only thing that we have done in the way of treatment was to administer hypodermic injections into the affected muscles of solutions of atropine and morphine, from which I have already obtained such good results in the treatment of spasmodic wry-neck. Under these the disease is rapidly yielding. He receives one-sixtieth of a grain of atropine and one-sixth of a grain of morphine once a day. He has had only two injections; but he has begun to improve. Dryness of the throat he has not complained of, but his pupils are seen to be a little dilated. No effect upon the pulse has been shown. The dose will be increased to the one-fiftieth of atropine, accompanied by the one-sixth of morphine, which to some extent counteracts the effects of the former. This will constitute the local treatment; while to remove the rheumatic element I will order him to take salicylate of sodium, fifteen grains every three hours, until he takes six doses, so that he shall take daily one drachm and a half. It can be mixed with a little spirit of lavender and mint water.

℞ Sodii salicylatis, gr. xv;
Spiritus lavandulæ comp., ♏x;
Elixir. aurantii, ♏xxx:
Aquæ menthæ pip., ʒj–♏xx;
Pulv. acaciæ, gr. j. M.

Sig.—To be taken every three hours until six doses have been taken in the day.

Continue the hypodermic injections.

TRANSLATIONS.

Tremor as a Symptom of certain Cortical Cerebral Lesions.—In a recent series of experiments conducted in the laboratory of Vulpian, the method of causation of some forms of tremor was especially studied by Dr. Gasternatzvy. He had previously found that muscular trembling analogous to that observed in the human subject in multiple sclerosis (*sclérose en plaques disséminées*) appeared in animals when the antero-lateral columns of the spinal cord were injured, which in health usually transmit the impulses determining voluntary muscular movements. Proceeding to investigate the production of tremor when the spinal cord was not invaded, he found that under the influence of chloroform the excitability of the cerebral cortex diminishes gradually, and as the movements under the electrical stimulation become weaker, muscular trembling appears. He therefore attributed the muscular tremor to weakening of the psycho-motor centres, especially since he found that the force of the faradic current had to be materially increased in order to obtain the same degree of response as before the anæsthetic was used.

These experiments seemed to the reporter to explain certain clinical facts, and to locate the causation of this form of tremor in the gray substance of the cortex of the hemispheres,—for instance, the tremor observed in patients afflicted with general paralysis of the insane. In fact, in this disease the essential anatomico-pathological lesion consists, in part at least, of a periencephalitis, and this leads to atrophy of the cortex of the hemispheres, with loss of the nervous elements and proliferation of connective tissue, production of pigment and of drops of fat. It is probable that these products remain to play the part of irritants to the other nerve-cells of the cortex, which have not as yet lost their functions. Besides, the paralytic tremor (one of the most important signs of this disease) itself furnishes some signs which show its dependence upon the gray matter of the cerebral cortex. First, since this trembling is general, and exists in all the voluntary muscles of the body, it shows that the lesion which provokes it exists in a part of the nervous system with which all these muscles are in communication, and the gray matter of the cortex of the hemispheres is precisely this region. Secondly, the paralytic tremor always accompanies the other symptoms, which depend incontestably upon certain lesions of the cortical gray substance,—for example, the symptoms of progressive dementia, analgesia, epileptiform attacks, and vaso-motor and trophic phenomena. Thirdly, at the commencement of the malady the tremor is scarcely discernible during slight, delicate movements, which are ordinarily the most complex and the best co-ordinated, and as the disorder gradually increases the tremor follows, until finally, in the last stage of the disease, the tremor leads to complete paralysis of all movements, either psycho-motor or voluntary. Consequently, there exists a relation between the paralytic tremor and the other symptoms of the disease on the one side, and upon the other with the progressive development of the anatomico-pathological process of the gray matter of the hemispheres of the brain, which constitutes the essential characteristics of the malady.—*Le Progrès Médical.*

Leprosy.—Dr. R. Suzor, of Mauritius, contributes to the *Progrès Médical* (No. 14) some interesting points with regard to leprosy. As the question of the contagion of this disease has recently been discussed, he brings forward the results of some personal researches in the Mauritius, Réunion, Sandwich Islands, and British Guiana. He first notes the great increase in the number of cases occurring in the ten years after the institution of Chinese immigration. Previous to the year 1848 it had been very rare or unknown; in 1858 it had increased to such a degree that one-tenth of the population was leprous, reminding him strongly of the epidemic in Europe of leprosy in the Middle Ages after the return of the Crusaders. In Guiana the contrast is still more striking. Leprosy was unknown either among the natives or white settlers prior to the introduction of slavery. Among the negroes there were some afflicted with leprosy. Isolation was practised, and the disease was limited strictly to the blacks; but in 1831 more than four hundred were established in a settlement on the banks of a river near which some Indians lived. In 1842 a large proportion of these natives were affected; but it was only those belonging to the affiliating tribe to whom the disease had extended, and especially had it oc-

curred in children of this mixed parentage. At the present time two per thousand of the entire population are leprous, and the whites and mulattoes furnish their share, as well as the negroes and Indians.

Several cases are cited which acquired leprosy by consorting with lepers; and in one instance two children of healthy parents became leprous apparently as the result of having been vaccinated with lymph taken from a child belonging to a leprous family. This case was believed to furnish conclusive proof of the communicability of the disease by vaccination. A number of cases in children and adults are cited to illustrate the hereditary transmission of leprosy. The question is asked, May an affection which propagates itself by heredity, by contact, sexual intercourse, and vaccinal inoculation, and which makes its appearance most often upon the uncovered portions of the body, be considered as contagious or not? As well ask the question of syphilis, which is far from being contagious at all periods, and does not always lead to hereditary accidents. Further investigations will be made in order to isolate and cultivate the bacteria of leprosy in human serum, and to compare with it the growth of the bacillus of tubercle in the same medium. If pure cultures can be obtained, an opportunity may occur of making inoculation-experiments.

Etiology of Dupuytren's Contracture.—A peculiar case is reported by Dr. Lange, of Stettin, of a woman, who for years had had a contracture affecting the ring-finger of each hand to such a degree that the finger remained flat upon the palm when the others were extended. Both ring-fingers were equally affected. An apoplectic attack supervened, with left hemiplegia, and from that moment the affected finger became fully extended and remained so; and of the folds of the skin of the palm, which before were so marked, only traces remained; while the other hand retained its former condition until death occurred, several years later.

This case would support the view (which is favored by the symmetrical character of the affection in both hands) that the disease has its point of origin in the cerebral nervous system, and therefore disappears in paralysis. A local disease of the muscle, tendon, or peripheral nerves would not disappear so rapidly after the onset of the hemiplegia. The surgical indication is to weaken or suspend the nerve-supply, which will affect the other fingers less than the contracted one. Nerve-stretching or excision of the nerve-trunk might prove of service.—*Archiv für Path. Anatomie und Phys. und für Klin. Medicin*, October 7.

Pneumonia treated with Massive Doses of Digitalis.—Petrescu, of the Military Hospital at Bucharest, reports remarkable success in the treatment of acute pneumonia from the administration of large doses of digitalis, given in the form of recent infusion. His conclusions, based upon observation of three hundred and fifty cases, are as follows:

1. Digitalis produces antiphlogistic and direct effects only when given in appropriate dose.

2. This dose is from four to six grammes (℥j–jss) given during the twenty-four hours, and continued for several days. In this way he has given as much as twenty grammes (℥v) inside of three days.

3. The treatment of pneumonia by digitalis is the only method at present of reducing the mortality of the disease to a minimum.—*Le Progrès Médical*, and *Deutsche Med. Zeitung.*

Precautions against the Spread of Hydrophobia.—A veritable epizoötic of hydrophobia having occurred in the department of Var, in France, it was made the subject of a report to the French Academy by Dr. Chassinat, of Hyères. M. Leblanc thereupon called attention to the law which compels owners of dogs or cats to destroy them on the first appearance of symptoms of madness, and requires local authorities to capture and kill all unregistered dogs found at large. It also forbids the sale for food of the flesh of animals which have been bitten by a mad animal until the expiration of at least six weeks. The Academy passed a series of resolutions calling upon the government to render uniform, generalize, and enforce the laws, and to postpone the abolition of the law forbidding empirics to treat animals affected with contagious diseases until July, 1887. M. Leblanc estimated that there are at least thirty thousand street-dogs in the city of Paris alone, which constitute a standing danger of the spread of hydrophobia.—*Journal d'Hygiène.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JANUARY 23, 1886.

EDITORIAL.

THE ACTION OF THE COUNTY MEDICAL SOCIETY.

AT the stated meeting of the Philadelphia County Medical Society held on the 6th instant, for the purpose of electing officers, the regular nominations for delegates to the State organization and the American Medical Association were set aside and a new ticket introduced and elected by a proceeding without a precedent in the history of the Society.

Now that the meeting is over, and we review its proceedings, we feel that no one who was present can escape a sense of mortification at the disorder which prevailed during the discussion, if not of regret for the results of the ballot. It is true that, by the concerted action of one hundred and fifty members, the Society (whose entire membership is nearly five hundred) finds itself with a bad precedent established, and with a lively factional quarrel in prospect.

Let us see what was gained by this revolutionary procedure. Those having the matter in charge succeeded in having declared elected delegates whom no one will pretend to be better or more representative men than those discarded. They also had passed a resolution disapproving of the course pursued by the American Medical Association at New Orleans, and instructing the delegates to "endeavor to secure such modification of that action as may best conduce to the re-establishment of professional harmony and to the success of the Congress." On the other hand, they have raised a storm of feeling in the County Society which must inevitably react in the end upon the leaders of the movement, and thus inaugurated a state of affairs which all should deprecate as threatening the best interests of the Society.

The evident intention of those who substituted, in this hasty and irregular manner, an entirely new list of delegates (some of whom were not even members of the Society) was avowedly to send only those who would endeavor to carry out the plan set forth at a meeting of a few members of the profession interested in the International Medical Congress, held quite recently in this city,—to wit, "that the present Executive Committee should unite with the Original Enlarged General Committee, and recommence" (*sic*) "the organization *de novo*."*

We have no hesitation in declaring that such a hope is futile; it can never be fulfilled. The American Medical Association and the profession will not invite the members of the original Committee again to assume control of the organization of the Congress. The probable result of such a course is apparent from their record. Thus, on May 8, 1884, that Committee reported the following resolution:

"That it shall be the duty of the Committee to extend, on behalf of the Medical Profession of the United States, to the International Medical Congress about to meet at Copenhagen, a cordial invitation to have the International Medical Congress meet at Washington, D.C., in 1887."†

This resolution was adopted, and the sum of four hundred dollars appropriated by the Association to meet the preliminary expenses of this Committee, and the money was afterwards paid by the Treasurer.

On April 28, 1885, the Committee reported to the Association that they had "met at Copenhagen during the meeting of the International Medical Congress, and presented the invitation, which was accepted."‡ To this was appended a

* See page 223, *ante*.

† Journal of the American Medical Association, vol. ii. p. 565, 1884.

‡ Ibid., vol. iv. p. 549, 1885.

"Preliminary Plan of Organization," that was discussed by the Association, which declined to endorse or accept their appointments, as they had exceeded their authority. The Association thereupon expressed its disapproval of their action by appointing a new Committee, but courteously continued them as a part of the Enlarged Committee. From this action the original Committee rebelled; and now a few of its members decline to participate in the efforts of the remainder, who are striving to make good the cordial invitation accepted at Copenhagen.

The question naturally arises, Is the course of these physicians loyal to the profession that intrusted them with a mission?

THERAPEUTICS OF INFANTILE PARALYSIS.

THE treatment of essential paralysis in childhood is too often disappointing and unsatisfactory,—disappointing to the parents because, on account of the abrupt onset, they are not prepared to appreciate fully the gravity of the disease, and unsatisfactory to the medical attendant, who may find that in spite of his efforts an interesting and attractive child has become the subject of a terrible deformity and is possibly crippled for life. Routine treatment in such cases, too, is usually inefficient, and children are allowed to grow up with withered, shortened limbs, dangling joints, and consequent disfigurement. A plan of treatment, therefore, which was formulated recently by Dr. William Murrell, in a lecture delivered upon this subject at the Westminster Hospital,* deserves serious consideration, since it is based upon an experience extending over six years, during which period notes were taken of fifty-six cases of this disease, and in every instance in which the treatment was carried out actively and systematically the lecturer declared that "the best possible results were obtained." This expression is qualified because of the fact that most of them were not acute cases, and that some, at least, were of many years' standing, and clearly unfavorable for treatment.

The method pursued is, in brief, during the first or febrile stage, rest, aperients (Friedrichshall water is excellent for this purpose), milk diet (peptonized if necessary), with small doses of tincture of aconite (one-fourth of a minim) given every hour until three doses are taken, and every alternate hour for three more doses, then repeated every three or four hours until the temperature is normal. Convulsions, if present, may require bromides by stomach or rectum. In the second stage, the child is to be allowed to get up, and have a liberal diet. Small blisters or tincture of iodine should be now applied to the spine, and physostigma given in granules (of one-fiftieth of a grain of the extract), beginning with one three times a day, and increasing gradually until one is taken every three hours.

This should be kept up persistently for many months; but after the first six weeks it may be combined with small doses of phosphorus (one-two-hundredth of a grain or less). As soon as the acute symptoms have subsided,—that is to say, at the end of three or four days from the onset of the attack,—massage should be commenced and carried on systematically by an experienced and expert hand. Special stress is laid upon this point, for upon the skill of the *masseur* or *masseuse* will depend to a large extent the success of the treatment. It is to be applied not only to the spine and back, but also to the paralyzed limbs. The methods found most applicable are *effleurage*, *friction*, *pétrissage*, and *tapotement*. The number of sittings should vary from one to five daily, not too prolonged: these must be kept up for at least six weeks, and they may be required to ex-

* Lancet, December 26, 1885, page 1177.

tend to six months or more, with occasional intermissions. Galvanism to the spine and either the galvanic or faradic current to the muscles (applied to the motor points) is a valuable accessory; and likewise baths of sea-water, or pine-baths. Cod-liver oil, extract of malt, and syrup of the phosphates, or of the hypophosphites, are also capable of rendering valuable assistance in the treatment; while the personal hygiene (especially clothing the child in flannel) is of great importance. Hot sand-bags placed in bed on each side of the affected limbs are useful at night.

We have directed attention to this treatment because it is based upon sound principles, and it has been subjected to the test of experience by an able observer, who assures us that it deserves a trial by the profession.

LEADING ARTICLE.

BATHS IN SKIN-DISEASES.

IT is a singular fact that, during all the centuries in which mankind has been giving and taking baths, no one has solved the problem as to the penetration of water through the skin. The balneological treatises of ancient, mediæval, and modern times, so far as we have examined them, have contained assertions *pro* and *contra*, no doubt; but it is only very recently that scientific investigations have been undertaken with the view of ascertaining with certainty how far the skin is permeable by water and by substances in watery solution. The point is one on which argument is easy, but demonstration difficult. Some years ago the books used to give the case of shipwrecked sailors who are able, it was said, to assuage the pangs of thirst by keeping their clothing constantly wet with sea-water, the inference being that some water must be absorbed through the skin. Scientific investigation, however, having proved that under ordinary circumstances a great loss of water is constantly taking place through evaporation from the skin, it is evident that the arrest of such evaporation would alone account for the limited relief gained by saturating the clothing with sea-water. In like manner the advocates of the various mineral springs of Europe have described minutely the advantages gained in one disease by bathing in one spring, while a neighboring one of almost precisely the same chemical composition and thermal qualities is said to exercise quite a different effect and to be useful in an entirely different class of diseases. To read the books written in description and praise of the mineral springs of the world, a long and dreary list, we might imagine that for every possible ailment some specific spring gushes from the earth in plenitude of healing power. And yet, eliminate the conscious and interested false statements, allow for the almost universal tendency to quackery and the belief in "nature's own remedies" and "mysterious virtues," take into account the influence of salubrious surroundings, regulated diet and regimen, and the concomitant employment of internal remedies, and, finally, consider how far the virtues of the waters are in many cases due to their thermic qualities, the regulated action of heat and moisture upon the body, and we can judge how little room is left for the specific effect of any substances which may be held in solution, even if it were possible that these could force an entrance through the skin and be taken up by the system.

The action and effect of water and its vapor, or of substances in watery solution, upon the system at large, and especially upon the skin, has only been carefully studied of late years. German and French physiologists have examined into the influence of various baths on the nervous and vascular systems, and also as regards the absorption of medicinal substances through the skin, until at present we are in the possession of sufficiently accurate data to form a practical estimate of baths as medicinal agents.

The effects produced by baths upon the skin, which alone will be the subject of inquiry in the present article, are of several kinds. In the first place, the temperature of the bath, without regard to its contents, has a certain effect. Thus, lukewarm and moderately hot baths diminish irritability of the peripheral ends of the cutaneous nerves, and for this reason are peculiarly valuable in cases where general pruritus constitutes a prominent symptom

or perchance essentially the disease itself. General pruritus of an idiopathic character is nearly always relieved by warm baths, and, with this in view, the careful practitioner will not neglect the employment of so valuable an adjuvant to the treatment by drugs. One practical drawback to the use of baths in some forms of pruritic skin-diseases lies in the fact that water is irritant to the broken skin, and thus in eczema the excellent thermic effect is neutralized by the chemical action of the water. This may be avoided by medicating the water in two ways,—by the addition of some demulcent, as starch or gelatin, or of some chemical agent, as borax or sodium carbonate. The exact influence of these agents in modifying the effect of water upon the raw and inflamed skin cannot be stated with precision. In the case of the sodium carbonate it is probably due to some principle connected with the osmosis of the fluids of the body: the sodium-solution being of a specific gravity approaching that of serum, transudation is prevented. Such, at least, is the theory which has been brought forward.

In the intense dermatitis of burns, and in skin-affections like pemphigus, where the epidermis has separated and the patient is, as it were, flayed, the continuous bath as devised by Hebra gives great comfort and relief. Hebra's bath consists of a convenient tub of large size, with a bedstead hanging by pulleys, etc., so that the patient can be raised and lowered as desired. In case of extensive burns, the water is introduced at a temperature of about 90° F., which is as hot as can at first be borne. After a few minutes the patient feels cold, and then the temperature of the water is raised to 104°–108° F., which gives great comfort. The patient remains in the bath day and night, eating, drinking, and sleeping in it, and being removed only for stool. Although not preventing the tendency to death in severe burns at the beginning, it gives much relief in the later suppurative stages.

The question of the absorption either of water or of substances dissolved in water through the uninjured skin is one of great interest. It is known that the skin is permeable in both directions for gaseous substances, and also that both sweat and sebum pass outward through the pores. Whether, however, water or watery solutions can be absorbed is as yet undecided, although the weight of scientific testimony is against such a view. The numerous experiments which have been made in this direction have for the most part been wanting in scientific accuracy, as has been pointed out recently by Leichtenstern, a writer of impartial and scientific spirit. Leichtenstern, as the result of a collation of the most accurate experiments of others and of his own investigations, concludes that imbibition of water and of salts dissolved in water may occur in the bath so far as the superficial layers of the epidermis are concerned; but this imbibition is not necessarily followed by absorption. Indeed, it is probable that the water imbibed during the bath is shortly afterwards lost by evaporation. In any case, the amount imbibed is so small as to elude estimation by weighing or otherwise. Various circumstances may favor cutaneous imbibition of watery solutions,—*e.g.*, warmth, long duration of the bath (up to several hours), and removal of the sebaceous greasy matter with which the skin is normally endued, either by previous washing with soap, or by repeated baths, or by the addition of detergent substances to the bath. According to Leichtenstern, the palms of the hands and the soles of the feet imbibe water most readily, on account of the absence of sebaceous glands from these parts. True absorption, in the proper sense of the term, of water and of salts or other non-volatile substances contained therein, has never been proved to take place in ordinary baths, although numerous experiments have been made to prove such a fact and assertions to the same effect are frequently met with in balneological literature. Another point of importance to remember is that the excretory ducts of the sweat and sebaceous glands are not so constituted as to be capable of absorbing water. To read the twaddle of the popular hygienists would lead to the belief that the "pores" of the skin are great open conduits, gaping and swallowing all that comes within their reach. So far from this, the gland-ducts afford all the resistance that minute canals lined with epithelium and blocked with oily matters (the sweat, it must be remembered, is mixed with sebum) can offer to the penetration of watery fluids. It is true, indeed, that by friction a minute quantity of water can be pressed into the gland-openings; but certainly the quan-

tity is too minute to exercise any appreciable physiological or therapeutic effect.

In the case of gaseous matters, however, the facts are somewhat different, for certain gaseous and volatile matters dissolved in water are, under appropriate circumstances, absorbed through the skin. Sulphurous acid and free iodine are thus taken into the system by means of baths. On the other hand, it is a curious fact that free carbonic acid is not absorbed, except in baths particularly rich in this gas, and even then only in small quantities.

The bearing of these facts on the therapeutic uses of baths is obvious, for if no absorption can take place through the skin except through chance fissures or the mucous membrane of the anus and genitalia, then the administration of many salts and other drugs by this method with a view to their constitutional effect must be an exceedingly clumsy and for the most part inefficacious proceeding. For while minute quantities of these substances may doubtless be absorbed, as a matter of fact, by whatever channel they enter the body, yet surely the number of drugs must be small and the necessities of the case peculiar which can lead to this method of administration.

Restricting, however, the use of baths in skin-diseases to those affections where they may be employed with real advantage, we have still a large number of cases where these can be employed with benefit to the patient. The use of warm-water baths in allaying irritation of the peripheral nerves has already been pointed out. A further use is found in those more or less generalized skin-diseases, as ichthyosis, where we have diminished secretion. Here the heat and moisture induce further action of the oil- and sweat-glands, and the macerating action of the water softens the dry, rough epidermis and prepares the way for ointments and other emollient applications.

The simple warm bath or the bath containing sodium carbonate is useful in cases of skin-disease when it is desirable to macerate and soften the crusts and scales before applying remedies. No marked curative effect, however, can be expected in diseases like psoriasis, for example.

In scabies and other animal or vegetable parasites of the skin, advantage is taken of the imbibition of watery solutions to destroy these parasites by appropriate medication, as by sulphuret-of-potassium baths. The water penetrates far enough at most points to destroy the itch-insect, and renders other medication, as by ointments, easier. In the mercurial vapor-bath we have an instance of the macerating and softening power of water in preparing the way for the entrance of volatilized mercury.

The known fact of the absorption of corrosive sublimate in watery solution in the baths given syphilitic infants is apparently in contradiction to the fact observed in physiological experiment, that watery solutions are not so absorbed. How the facts can be reconciled we cannot at present say. Both have been abundantly verified, however.

As regards the particular skin-affections in which the administration of baths may be employed to advantage, this is not the occasion to enter into the subject. We have only endeavored to give the general indications for their use, and to point out the value of this mode of treatment intelligently applied, and the necessity of understanding what may be accomplished by baths—what they can do and what they cannot do—in the cure of diseases of the skin.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

NEW REMEDIES—Sparteine Sulphate.—The French medical world is at present in a state of excitement over the interesting subject of therapeutics, and we are able this month to give some details of the latest efforts made to introduce new remedies. One of the most recent is sulphate of sparteine, obtained from the broom-plant, *Spartium Scoparium*. Dr. Laborde, the chief of Professor Béclard's physiological laboratory, has made a number of experiments with this substance, and has discovered that it has a remarkable effect on the heart. In dogs to which were given doses of one centigramme, there was a considerable augmentation of the heart's action, and this result was not owing to any modification of the respiratory rhythm, because it continued after the animals were also given curare, so that he thought that the action of the drug was on the heart-muscle itself. Discovering that the sulphate of sparteine increases the energy of the heart's action without giving rise to toxic symptoms,

Dr. Laborde asked Professor Germain Sée to try it on his patients.

Dr. Sée thus reports on it: "Three characteristic and conclusive effects are the result of my observations. The first, which is the most important, is the quickening and renewed action of the heart and the pulse: in this it resembles digitalis or convallamarine, but its action as a cardiac tonic is very much more prompt than either of these, and more durable. The second effect is the regulation of the heart's rhythm that has been disturbed; and I believe that no other medicine can be compared with it for this purpose. The third result is the acceleration of the beat: this would be useful only in those cases of muscular atony with slowness of the beat: in this action it resembles belladonna. All these phenomena appear at the end of the first hour after the administration of the medicine, and the action maintains itself for three or four days after the drug has been discontinued. During this time the general strength is increased and respiration is easier: the urinary function alone does not seem to be influenced by the moderate doses I have used up to the present."

The sulphate of sparteine seems, then, to be applicable to some alteration in the heart: either when it has undergone an alteration in its tissue or has become incapable of compensating the obstacles to circulation. When the pulse is irregular, intermittent, and arhythmic, the sulphate of sparteine will rapidly re-establish the normal type. When the circulation has slowed up, the medicine seems to relieve this functional trouble, and at the same time it maintains and augments the newly-acquired force of the heart-muscle.

Terpene.—The principal objections to the employment of turpentine in medicine have been its insolubility in water, its odor, and its taste. The bihydrate of turpentine called terpene is exempt from these, and is now taking an important place in therapeutics. It has been used by Dr. Dujardin-Beaumetz and by Professor Germain Sée quite extensively. It is obtained by the hydration of turpenthène, which is a product of crude turpentine, at a temperature of one hundred and fifty-six degrees Centigrade. It is a white powder crystallized, and not a liquid, as often stated. It dissolves in two hundred parts of cold water, or in six or seven parts of alcohol. Its solutions have a bitter taste, but are not at all nauseating. Its characteristic chemical reactions are: nitric acid added to a solution gives an odor of hyacinth, and sulphuric acid gives a green precipitate; these reactions will show in the urine of patients taking the drug. There is still great dispute as to its action in health; but its effect on the patients who are ill is not contested. The administration of twenty to thirty centigrammes of terpene will augment the bronchial secretions and the expectoration. It is then an expectorant for use in subacute or chronic bronchitis. On raising the dose to eighty, or to one hundred, centigrammes (one gramme), terpene will provoke contractions of the vessels and also of the mucous membranes, arrest hemorrhage, and stop, or at least greatly lessen, bronchial secretion. It has checked very rapidly the hæmoptysis of commencing phthisis: so that in this dose it is a hæmostatic and a drier of bronchial secretion. (See on this subject an article by Dr. William Murrell on "Pure Terebene in the Treatment of Winter-Cough," in *British Medical Journal*, December 12, 1885.)

The following is Dr. Germain Sée's formula for its administration:

℞ Alcoholis (at 85), 250 grammes;
Aquæ, 30 grammes;
Terpene, 10 grammes. M.

Sig.—Three teaspoonfuls per day, to be given in lemon-syrup. It should be given with or directly after meals, to prevent any gastric trouble.

Hypnone.—We spoke of this substance in a late letter; but it has grown so rapidly in favor that it will be well to say something more on the subject. As before stated, it is a phenyl-methyl-acetone, to which Dr. Dujardin-Beaumetz has given the name of hypnone, owing to its decided hypnotic properties. It is now in constant use in all the hospitals, and the wholesale drug men are advertising it at ten cents a gramme. M. Dubois finds that patients submitted to its action before taking chloroform sleep much better. M. Laborde has made a series of experiments with it on animals, and finds that intravenous injections of the medicine rapidly produce sleep with anæsthesia and analgesia. Instilled into the eye, it produces local anæsthesia, but at the same time a most violent conjunctivitis.

The dose of hypnone is from six to eight drops, and the same, or even better, effects will be obtained from this dose as from two grammes of chloral or four grammes of paraldehyde. The hypnone needs alcohol at ninety degrees to dissolve it in rather a large quantity, so that M. A. Petit advises the following formula:

℞ Hypnone, 15 drops;
Alcoholis, 20 grammes;
Syrupi, 55 grammes;
Glycerini, 25 grammes. M.

Sig.—Each teaspoonful of this gives three drops of the hypnone. The remedy may also be given in capsules.

It is rather curious that for some time special attention has been directed to new hypnotics. We have now to speak of hopeine, extracted from hops, of which it is the supposed narcotic principle. We have also uréthane, which is a white substance, fusible at one hundred degrees Centigrade, easily crystallizable. All these, with chloral, paraldehyde, and still another, have close analo-

gies in their chemistry that are very curious, and will require a study of all the acetones, commencing with the ordinary acetone of acetic acid. The new remedy, hypnone, is obtained by dry distillation of a mixture of the acetate of calcium with the benzoate of calcium. The newest compound of this series is the benzophénone: this is obtained from the dry distillation of the benzoate of lime. It is in crystals of an amber color and an agreeable taste: it is now under experiment.

In regard to uréthane, it is now used very much in the German clinics by Von Jaksch, and by Sticker in Professor Riegel's clinic. It is a pure hypnotic, without being anodyne like chloroform or paregoric. It succeeds best in nervous insomnia, and calms the cough in phthisis. It is advised in one-gramme doses every half-hour or every hour, rather than in the massive doses, as given by some, of two to four grammes at once. Like the others of this series, it is well supported by patients, and the sleep produced resembles the normal physiological sleep. Certainly all this variety must afford a great relief to the tired morphia-eater.

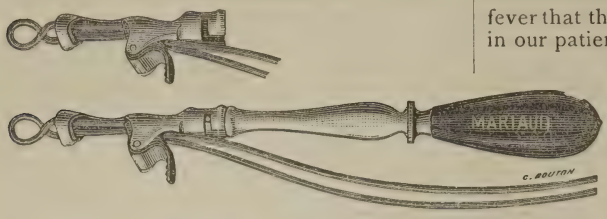
Dr. Desnos has just been studying some of our American plants, in particular the cholagogues and purgatives, such as baptisine, sanguinarine, juglandine, and phytolaccine, upon the human organism. He reports that "they are, all four, brown powders, having a salt taste, with an after-taste of bitterness. They are very hygrometric. I administered them in doses of five to ten centigrammes, under the form of plain pills. The baptisine is a resinous matter obtained by precipitation by water of the alcoholic tincture of Baptisia tinctoria. The sanguinarine is also a resin obtained from the Sanguinaria Canadensis. The Juglans cinerea of North America furnishes the juglandine, which is taken from the inner bark of the tree. The Phytolacca decandra, a beautiful plant of the United States, gives the phytolaccine. I tried it on seventeen patients in doses of ten to twenty centigrammes, and it seems to be the best of them all, provoking abundant stools containing a certain quantity of bile: in high doses it caused vomiting and depression. Baptisine, given in fourteen cases, was found to be a fair purgative, causing some colic; the juglandine about the same in the same doses, except that it seemed to cause irritation of the intestine. The sanguinarine, even in sixty-centigramme doses, gave only negative results. Phytolaccine is a reliable purgative: sure in its effects, without any inconveniences, it is an agent that should enrich the therapeutics of constipation."

Professor Vulpian has just made a report to the Académie de Médecine on the treatment of rheumatism by the salicylates. He stated that it is known that salicylate of sodium is efficacious in acute articular rheumatism and in acute attacks of articular gout, but its influence, however, is of not the slightest use in blennorrhagic rheumatism, and it is feeble in chronic and subacute forms of rheumatism. The salicylate of lithium seems to be quite as efficacious as the sodium in the first forms. In cases of patients treated by the salicylate of sodium, it often happens that after a rapid amelioration the joints remain tense and the use of the joints is still more or less constrained and painful. Now, even in doses high enough to be toxic, no further effect will be produced by the salicylate of sodium; and it is here that the salicylate of lithium will come in, and in a few days the last traces of the rheumatism will disappear.

The lithium salt seems to be quite as active in the treatment of those forms of acute rheumatism where the fibrous tissues are attacked, and it is more active than the sodium salicylate in the subacute forms of articular rheumatism that are progressive, and indeed even in many cases where salicylate of sodium has been faithfully tried. He had seen it fail, and yet, in a treatment of fifteen days, the use of salicylate of lithium led to complete success. In chronic articular rheumatism, when the joints may be more or less deformed and swollen, even half in a state of anchylosis, there will often be a marked improvement after the use of salicylate of lithium. In two cases of women at the hospital, they recovered the lost sleep and were able to move the limbs.

As in other medicines, there is a dose under which but little good will be obtained. For salicylate of lithium it is four grammes a day. Sometimes it will be necessary to give from four and a half to five grammes. When the improvement ceases, it will be sufficient to increase the dose fifty centigrammes. Intolerance will mostly come on at doses of five grammes to five and a half. He had seen some rheumatics resist a dose of six to seven grammes of salicylate of sodium that afterwards yielded to a dose of four grammes of salicylate of lithium. He therefore recommended the use of this preparation.

At a meeting of the Société de Médecine de Strasbourg, on the 3d instant, M. Koeberlé made a communication on an important simplification in the operation of hysterotomy by the use of an elastic ligator that Professor S. Pozzi, of the Paris Faculty, presented to the French Congress of Surgeons last summer. Dr. Pozzi's instrument is explained by the wood-cut on the next page. It is very simple, consisting of two pieces, which can be taken apart. The elastic cord is passed through, and, the button pressed, it is held in place. A simple turn of the instrument makes the cord cross, when it may be tied at leisure. Dr. Pozzi, in his interesting pamphlet on the subject of the "Technique of Elastic Ligatures," says that he prefers elastic cords, and not tubes. He uses round ones five millimetres in diameter. He regards the black as the



best kind. Dr. Koeberlé said, in regard to this method,—

"By the application of the elastic ligator of Dr. Pozzi, it is now possible to make but two ligatures (lateral) on each side: one in silk, placed outside the ovary across the large ligament, and the other wire, taking in the rest of the tissues up to the median line of the os uteri and the vagina. The wire ligature is placed after having first put the elastic one in. It is passed to each side of the fimbriated extremity of the broad ligament that has served for the attachment of the silk ligature. It can be transformed into a lost ligature after having excised the ovary on each side. The use of this elastic ligature with M. Pozzi's instrument, with a strong elastic cord, renders this operation so little serious, permitting any surgeon to make it, that now it is one of the regular operations of surgery."

M. Koeberlé did two hysterotomies with complete success. One of the tumors weighed eight kilogrammes (about eighteen pounds). In some sixty cases that were operated by M. Koeberlé, cure was the rule.

Professor Guyon, at the Necker Hospital, had an interesting case of vesical tuberculosis. He said, "I am about to perform the supra-pubic operation for a patient who is not one of the regular cases for that operation, as he has no stone in the bladder, but has tubercles there. The interest in this case is not only in the nature of it, but in the conditions under which we are obliged to interfere. The principal one is excessive pain, from which the patient has suffered for a long time without obtaining the slightest relief from any therapeutical means.

"This operation must be looked at from two points of view. First, does the nature of the lesion under which he is suffering permit us to make the operation or not? and, having resolved to do so, will it be of use to the patient? As to the first point, we must ask ourselves if the traumatism will not have the effect of doing more harm than good. This question was raised by Professor Verneuil, and it is of great importance, as operations on these patients have suddenly aggravated their general condition; but in this case it is not likely such a result will follow.

"The tuberculosis here is local, and it has been demonstrated that instrumental interference in such cases will often produce an amelioration and sometimes a cure. Experience has also shown that it is when there is fever that there is danger of after-trouble; but in our patient no fever is present. As to the question whether we are justified in operating, owing to the painful condition of the bladder, here we must state that this is a delicate question that is far from being settled. This is owing in great part to the number of cases in which the diagnosis of tuberculosis has been wrongly made, and where often a painful cystitis has been mistaken for it. The first thing to do, then, is to be sure of the diagnosis. Let us take the history of the case. A young man, 24 years of age, comes before us without any pathological antecedents and without any blennorrhagic troubles. That will exclude any chance of a local infection by contagion. The commencement of this was noticed when he was in the army, and found that he had frequent need to urinate (without pain, however). On being sent to the hospital, sounds were used, but without any benefit; on the contrary, it increased the difficulty, and he had pain, which was intense at the end of the act of micturition. He was obliged to rise fifteen to twenty times at night, and the pain was such that it felt like a knife cutting the urethra all along its course."

After coming under the professor's charge he was able with morphine to calm the pain for a time. When the clinical march of this trouble is taken into consideration, notwithstanding the fact that physical examination did not reveal anything, he did not hesitate to call it tuberculosis of the bladder, because the symptoms came without any previous exciting cause (such as blennorrhagia), without any constriction, without traumatism, without any foreign body in the bladder, and without any of the usual causes of cystitis, including hæmaturia. Examination of the urine took away all doubt, as a number of the bacilli of tuberculosis were found.

As to the danger in this operation, this is the third time that he had performed it in such cases. In the other two cases the cicatrization of the wound was only too rapid: it was followed by complete cessation of pain. The operation, then, offering no danger, is it useful? This is without doubt. After the bladder is open, he said, the manner of proceeding would depend upon circumstances. If the growth be not too extensive, he would endeavor to remove it as completely as possible. He would utilize Petersen's balloon, with vesical dilatation. In regard to this, the dilatation of the bladder must be made with great care, and the best test of this may be found in the behavior of the bladder: when the patient is sleeping profoundly under chloroform, the bladder must not resist the injection of small quantities of liquid. If it does, —if, notwithstanding the anæsthesia, it continues to resist,—then it must not be distended.

M. Pasteur is going on at a great rate with

his inoculations. The government officials have visited his place: they saw some forty persons operated upon, and after the visit they decided to present a bill to Parliament to furnish him with a proper building in which he can continue his experiments, so that before long there will be a hydrophobia hospital here. Patients are flocking in from all over the world, America giving her share. It may be stated, however, that M. Pasteur is only too glad to see others try his simple system, and, since the rabbit-marrows are sold to proper parties applying, we do not see why your surgeons do not try the system for themselves, instead of sending patients over here.

THOMAS LINN, M.D.

PARIS, FRANCE, December 18, 1885.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA ACADEMY OF SURGERY.

(Continued from page 291.)

A STATED meeting of the Philadelphia Academy of Surgery was held December 7, 1885, the President, Dr. D. Hayes Agnew, in the chair.

DIPHTHERITIC CASTS FROM THE URETER.

Dr. Thomas G. Morton also related the following history of a case. On the 5th of November last, a lad, 14 years of age, was admitted into the Pennsylvania Hospital with violent cystitis and symptoms of stone. At the age of four years he had been operated on for stone in Ireland, and a good-sized calculus removed. Since then, and until six months ago, he had remained well. He then experienced pain in the bladder, urethra, and at the end of the penis, and had frequent stoppage of urine, which was due to plugs of dense matter which lodged in the urethra or meatus, and he said that he experienced great difficulty in forcing them out, after which the flow of urine would be free.

On admission, he was very pale, feeble, and in constant suffering. The bladder was examined, and no foreign body was detected. He was given anodynes, placed upon the milk diet, and the bladder was washed out daily. The urine contained albumen, pus, and the fragments of membrane, which were constantly discharged or extracted from the urethra, and appeared to be tubes from which a longitudinal strip had been removed. A week after the first examination, the symptoms continuing, he was again etherized and the bladder examined, and, although no stone was detected, I decided to perform cystotomy. At the time of operation one of the plugs of membrane blocked up the meatus, and required some effort with a forceps to remove it. In the bladder I found about two tablespoonfuls of false membrane in a mass made up in part of incomplete tubes; and as this was adjacent to the right ureter, and as the patient had had some symptoms of discomfort in this and the kidney region, it seemed possible that these tubes were thrown off from the ureter on this side.

In the meshes of the mass of membrane removed there was a considerable deposit of calcareous matter, and numerous fragments of stone weighing probably four or six grains. The mass had likely been accumulating for a long time.

The bladder-wound has been kept open by a large silver tube, and injections used daily. The presence of the membrane has almost ceased, and little or no suffering is experienced. There were no symptoms, it appears, such as seen in diphtheria at any time in the course of his illness, although there was a hectic condition when the patient was first received.

DISCUSSION.

Dr. John B. Roberts: I have never seen a case in which tubes of this kind were passed. At a meeting of the Clinical Society, two or three weeks ago, a series of blood-casts from the ureter were shown. These of course were solid. They looked so much like worms that the woman at first supposed that she was passing worms. They had the appearance of earth-worms. They were examined, I believe, by Dr. Leidy, who pronounced them to be clots.

Dr. J. H. Brinton: The report of Dr. Morton's case has suggested one which I now have under treatment, and about which I am somewhat puzzled. Six or seven weeks ago a man of 36 presented himself to me with partial anchylosis of the left hip-joint: the thigh was turned inward, and flexion was arrested at an angle of one hundred and thirty-five degrees. He told me that he passed no urine through the urethra, but that all escaped through a series of openings extending from the groin far back into the perineum. There were nine of these openings, and more water passed through the posterior than through the anterior ones, although some time since a large quantity of water passed through the anterior channels. He had suffered much pain, and was greatly emaciated.

On examining the urethra I found marked narrowing at and behind the membranous portion; at the same time the presence of some hard foreign substance could be detected between this portion of the urethra and the neck of the bladder. A small lithotrite was then introduced, when I succeeded in extracting three or four portions of bone. These varied from three-fourths of an inch in length to the size of a grain of coffee. He then remembered that he had passed a piece of bone from one of these external openings. From the history furnished by the patient, it was evident that he had suffered from scrofulous

disease of the bones of the pelvis, and especially of the acetabulum, when a child. This condition had continued for twenty-seven years, the patient being better or worse at intervals. During the past two or three years the flow of urine through the urethra has been much interfered with, and during the last few months all of his urine has passed by the fistulous channels.

In view of the exfoliations and of the probable diseased conditions in front of the bladder, I determined to open up the parts by the median cut,—in this instance not strictly a median operation, since on account of the displacement of the parts due to the anchylosis I was obliged to cut in the line of a curved raphé. I then opened the membranous urethra, and, passing upward, reached a cavity containing pus and urine, and directed towards the left or diseased side.

This cavity was most probably the bladder distorted to the left side, bound down, and having suffered some loss of substance, or else it was a cavity or cyst formed in front of and communicating with the bladder. I had at first hoped that by treating the case as one of the median section for cystitis I could accomplish a cure; but the condition of the parts, as developed at the operation, seemed to me to obscure the prognosis.

Since the operation the patient has in some respects done well: his pain has disappeared, he has gained flesh, and generally he is in every way better. Locally, however, his progress has not been all that I could wish. The treatment has consisted in keeping the urethra well dilated by an india-rubber catheter,—at times kept in continuously, and at other times introduced at short intervals. The median cut has also been kept open, although a rapid tendency to heal is present. The patient can now readily retain his water for two hours. After that time it will escape; and although some urine passes by the median cut, yet it undoubtedly manifests a preference to escape by three or four of the posterior fistulous openings. None now passes by the anterior openings, those near the groin and on the front part of the thigh. When the catheter is introduced into the bladder a small quantity of purulent matter, say a drachm, sometimes escapes before and usually follows the flow of urine.

The President: It is probable that the bladder is tied down to the side of the pelvis, so that when it is empty that portion forms a little sac or diverticulum. If such is the case, it will be a difficult matter to cure it. In order that the bladder shall empty itself, it is necessary that it shall contract in all directions.

Dr. J. William White: The indication in such a case seems to be to keep a full-sized catheter in the urethra or the perineal opening all the time. The genu-pectoral position would also probably help to drain the bladder.

Dr. Nancrede: How would it do to make a supra-pubic incision for exploring the bladder?

Dr. J. H. Brinton: I have thought of that for a future operation.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Meeting of December 28, 1885.

The President, Daniel Lewis, M.D., in the chair.

PROLONGED LOCAL ANÆSTHETIZATION BY INCARCERATION OF THE ANÆSTHETIC FLUID IN THE FIELD OF OPERATION.

Dr. J. Leonard Corning read a paper on this subject. By experiment he had learned that, by shutting off the circulation from the part to be anæsthetized by hydrochlorate of cocaine, insensibility produced by the drug could be indefinitely prolonged. The reasons for this were not hard to conceive. We were thus enabled to reduce the constitutional symptoms to a minimum. Here were advantages not to be overestimated; for if, as in the ordinary method without incarceration of the anæsthetic, we inject a sufficiently-concentrated form to influence the general nervous system, there would be liability of establishing a change in the nerve-filaments of the brain and cord. In speaking of the very low percentage of cocaine which would produce anæsthesia when incarcerated, Dr. Corning had found a one-, a one-half-, a one-third-, and even a one-fifth-per-cent. solution of the cocaine to produce insensibility. A one-fifth-per-cent. solution, however, is too weak for practical use. For ordinary purposes, a solution of one-half to one per cent. is most desirable.

In order to avoid injection of the solution into the lumen of large veins, Dr. Corning applied a moderately strong rubber band around the limb, obstructing the return-circulation, and, having thus rendered the veins prominent, he mapped out their course with a soft blue pencil. This was the more important inasmuch as, after applying Esmarch's bandage and rendering the limb bloodless, preparatory for the injection, the course of the veins could not be seen. Having mapped out the veins, he rendered the part bloodless nearly up to the point of operation by Esmarch's bandage, then made the injection just below the margin of the tourniquet, which was tightened shortly after making the injection. At first, two to five minims of the fluid were injected just under the epidermis, and, having rendered the superficial parts insensitive, the needle could be made to penetrate more deeply without causing the patient more than trifling pain. The greater the extent of the operation, the weaker should

the solution be, if we wished to avoid producing constitutional symptoms. It was necessary to make the injections as rapidly as possible, in order to avoid deportation of the anæsthetic by the blood-stream before applying the tourniquet. The tourniquet should be applied just above the anæsthetic zone. The extent of the zone was measured by the æsthesiometric probe.

In cases of operations upon the face and parts of the body where the tourniquet could not be employed, Dr. Corning made use of hæmostatic rings. These made pressure upon the integument surrounding the field which it was desired to operate upon, and while they did not so completely cut off the circulation as did the tourniquet, still they incarcerated the anæsthetic sufficiently to permit of a severe and protracted operation without danger of constitutional symptoms from the amount of cocaine used.

Dr. Daniel Lewis, Dr. M. J. Roberts, and many others could now testify to the practical working of this method.

The PRESIDENT said the case referred to by Dr. Corning, in which he employed this method, was one of recurring epithelioma of the left shoulder. The incision made was three and a half inches long, and the skin was unusually thick; yet the patient experienced practically no pain during the operation, which lasted about forty minutes. The hæmostatic ring was used for incarcerating the anæsthetic.

Dr. M. J. ROBERTS had employed this method with satisfaction in exsection of the elbow-joint, of the hip-joint, in scraping out large abscess-cavities, etc. He thought the method marked a signal advance in anæsthesia.

THE TREATMENT OF PELVIC ABSCESS IN WOMEN BY INCISION AND DRAINAGE.

Dr. PAUL F. MUNDÉ read a paper on this subject, in which he said that in the majority of cases recovery took place after exudation following pelvic cellulitis and pelvic peritonitis, but in some instances a long period of time elapsed before complete absorption of the exudate occurred. In some cases the exudate broke down and formed an abscess. This was most likely to take place when the exudation was large and formed rapidly, and when the recuperative powers of the patient were below par. The majority of cases of pelvic abscess followed cellulitis, the minority followed peritonitis. In the cases of abscess referred to in this paper and following pelvic peritonitis, although the abscess really formed within the peritoneal cavity, it was practically shut off from that cavity, becoming, as it were, extra-peritoneal by the pathological changes which took place. Fortunately, the necessity for making a differential diagnosis between the two classes of cases, those developing in connection with pelvic cellulitis and those in connection with pelvic peritonitis, did not often arise.

From among four hundred cases of pelvic cellulitis and peritonitis of which he had records, only forty-eight terminated in pelvic abscess. Dr. Mundé thought that this percentage was larger than usual, because many of the cases, twenty-one, were seen in consultation. Twenty-three of the cases opened spontaneously; eight were treated by free incision and drainage (six through the abdominal wall and two through the vagina); in three cases there was instituted abdomino-vaginal drainage. All of the cases operated upon recovered. Dr. Mundé had seen only one case in which he thought the patient must necessarily die.

When he suspected suppuration in a case of pelvic exudation, he first proceeded to verify his suspicion by the introduction of the aspirator-needle. If only a small amount of pus was supposed to be present, he attempted to remove it by aspiration through the point of selection, usually in the vagina. If a number of small abscesses were suspected of being present, the aspiration was repeated until all were evacuated. Some years ago he reported eight cases treated in this manner, and since then he had so treated eight more, and in none had he had occasion to regret the procedure. In one, however, the case turned out to be one of dermoid cyst, and, had an incision been made in the first place, the true nature of the condition would have been earlier recognized. But it was not advisable to treat a case by simple aspiration if the abscess-cavity contained as much as three ounces of pus. Here the walls would not collapse and unite, but the cavity would refill with pus.

The treatment should be by free incision, in order to effect perfect drainage. Usually the spontaneous opening which formed in the rectum was too high up to be reached and more freely divided, and Dr. Mundé doubted whether the rectal opening should be enlarged anyway, for the contact of fæces would probably produce additional inflammation. If not treated, the patient might go on for years, with occasional discharges of pus through the opening in the rectum. But, if the spontaneous opening formed in the bladder, the drainage would be better than if it occurred in the rectum, and the wound would usually heal in a comparatively short time. A spontaneous opening through the vaginal wall, if small, might become obstructed by a clot or a fold of the mucous membrane, and prevent free drainage and union. The opening should be enlarged, the abscess-walls scraped, and, if necessary, a drainage-tube inserted. If the drainage-tube became irritating or did not effect complete drainage, the cavity should be injected once or twice a day with an antiseptic solution. Insufflation of iodoform was sometimes employed.

Dr. Mundé referred briefly to some of the unusual forms of pelvic abscess. The pus might find its way down to the perineum, or the point of fluctuation might be found at the crest of the ilium on one side. The abscess-cavity might be very large, containing more than a pint of pus, and there might be sinuses communicating with other collections of pus in the pelvic cavity. If fluctuation appeared near the crest of the ilium, the aspirator should be introduced, and, if pus were found, the grooved director should be introduced, and an incision made with a blunt-pointed bistoury. Then all sinuses should be explored. If the epigastric artery were divided, it should be ligated. As a rule, the freer the incision, the more quickly would the abscess heal. If pus had burrowed deeply into the pelvic cavity, an abdominal incision alone would not answer; it would be necessary to make a counter-opening through the vagina and establish thorough drainage. Daily antiseptic injections should then be practised. If the abscess were high up and adhesions had formed to the abdominal wall, the sac of the abscess being practically extra-peritoneal, drainage should be established through an incision, care being taken not to injure the peritoneum.

Dr. Mundé had embodied in his paper the histories of ten cases which he did not read.

Dr. W. M. Polk thought the paper a very good exposition of recognized methods for treating pelvic abscesses in women; he had, however, hoped to hear something new, especially with regard to the management of certain difficult cases which we come across in practice, and in which ordinary methods fail to obliterate the abscesses. Dr. Polk gave the physical signs and the treatment adopted in a case of deep pelvic abscess having no connection with the vagina, in which he made an abdominal incision and reached the abscess in that way. Although Dr. Mundé seemed disposed to criticise the procedure, Dr. Polk said he felt quite sure that even Dr. Mundé would not have discovered or reached the abscess through the vagina: other surgeons than himself had failed to do so. The mortality from pelvic abscess he thought was greater than was stated in the paper. There were some cases, he believed, in which numerous cavities and sinuses existed in the pelvic cavity, which rendered it impossible to stop the suppurative process which was destroying the life of the patient, in which he thought we would be justified in opening the abdomen, lifting the intestines out of the pelvic cavity, and incising the abscesses and sinuses. Dr. Polk pointed out the danger of wounding the uterine artery in making openings through the vaginal wall.

Dr. W. T. Lusk had also been led to suppose that the mortality from pelvic abscess was greater than had been represented this evening, and the need of a practical paper on the subject was evident. He had seen some cases in which the pelvis was almost riddled with abscesses, yet a cure was effected by thorough drainage. He was once very apprehensive on seeing a physician make extensive exploration through an opening in the vaginal wall for the purpose of breaking up the cavities and establishing drainage; but the patient recovered. The danger of mistaking pelvic abscess for ovarian cyst and other conditions was sometimes considerable.

Dr. W. Gill Wylie thought most cases of pelvic abscess resulted, not from pelvic cellulitis, but from pelvic peritonitis arising from the Fallopian tube, its ligament, and the ovary. The tube became rolled backward and obstructed, and an abscess was liable to form which might either burrow downward and have for its walls the cellular tissue in the pelvic cavity, or extend upward and form an abscess in the peritoneum and cause danger of death from peritonitis. In exploring an opening in the vagina made by a pelvic abscess, he would not cut, but dilate, thus avoiding injury to the artery.

The paper was further discussed by Drs. Irwin, Putnam Jacobi, Fruitnight, and the author.

Dr. Putnam Jacobi had followed Dr. Mundé's instructions, laid down in a former paper, to puncture with the hypodermic needle in a case of supposed pelvic abscess following an acute cellulitis, but she feared the punctures helped to bring on the formation of pus. The question was, how early after an acute attack of pelvic cellulitis should aspiration be done in order to determine the presence of small collections of pus.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held December 23, 1885, the President, John A. Wyeth, M.D., in the chair.

CARCINOMA OF THE STOMACH.

Dr. R. Van Santvoord reported that the specimens presented at the last meeting as supposed specimens of multiple myoma involving the stomach, bladder, and rectum were found, on microscopical examination, to be carcinoma.

MULTIPLE URETHRAL STRICTURE; PERINEAL ABSCESS.

Dr. Wackerhagen presented the genito-urinary apparatus removed from the body of a man 45 years of age, who, twenty years ago, had suffered from gonorrhœa. No noticeable sequelæ followed until last spring, when the patient noticed a swelling in the perineum, and afterwards had a perineal abscess, frequent urination, and, finally, dribbling of urine through a perineal fistula. When Dr. Wackerhagen saw the patient in

consultation last November, three urethral strictures were discovered, the meatus urinarius was contracted, and there was phimosis. Circumcision and internal urethrotomy were performed, and nine days afterwards external urethrotomy. The patient died eight days after the second operation. There was no elevation of temperature until within a few days before death, and the highest temperature reached was 102° F.; there had been no chill. The autopsy revealed a laceration of the mucous membrane of the urethra, and between this and the prostate was a fistula leading to a perineal abscess with principal dimensions of two and a half by two inches. The cavity of the bladder was about equal to that of the perineal abscess. There was slight dilatation of the ureters, and in the left kidney were abscess-cavities.

The PRESIDENT said that he had a similar case under care, the only difference in the history being that his patient had had chills.

SYMPTOMS SIMULATING TUBERCULOSIS.

Dr. L. EMMET HOLT presented two sets of specimens, removed from children, which were chiefly interesting from a point of contrast. In the one case the child had distinct symptoms of tubercular meningitis, but the autopsy revealed no tubercles whatever; there was slight cirrhosis of the liver. In the other case the child was apparently in excellent health until within three days of death, but at the autopsy tubercles were found in the lungs, liver, spleen, and kidneys. During the presence of the cerebral symptoms in the first case four doses of quinine were given, and there was active dentition, which might partly account for the symptoms.

Dr. AMIDON said it was his firm belief that some cases of tubercular meningitis recovered. He referred to one which came under his observation, in which recovery took place during the use of heroic doses of iodide of potassium. There was diplopia, frontal headache, facial paralysis on the right side, excessive photophobia, and maniacal disturbance at night. The patient was an adult, and was in a condition of advanced phthisis, and, although her condition was not such as to justify heroic treatment, she was treated by the administration of what amounted to about an ounce of the iodide of potassium in twenty-four hours. She recovered entirely from the cerebral symptoms, and at the autopsy (the patient dying some time afterwards) not a trace of meningitis could be found. He had always regarded it as a case of tubercular meningitis cured. The patient had no history of syphilis. She had well-marked pulmonary tuberculosis.

Dr. VAN SANTVOORD remarked that in the case of children marked cerebral symptoms were very frequently coincident with other disturbances, and he had been so frequently disappointed with reference to diagnosis and post-mortem changes that he had refrained from making a diagnosis until he saw the lesion in the dead-house.

Dr. PUTNAM JACOBI said that the proximate cause of symptoms in tubercular meningitis was hyperæmia of the meninges and softening of the gray matter around the tubercles and immediately under the meninges. Thus we might suspect tubercular meningitis and it might be simulated by any cause which would produce hyperæmia of the meninges.

Dr. VAN SANTVOORD had been struck with the extreme latency of the course of tubercular meningitis in some cases. He recalled one particularly, in which the process was of weeks' and even months' duration, and gave rise to marked cerebral symptoms only a few days before death.

Dr. J. C. PETERS said he had never seen a fatal case of tubercular meningitis unless there was evidence of tubercles in other organs, and he also thought it was exceedingly rare for recovery to take place if there was tuberculosis elsewhere.

Dr. AMIDON remarked that a very trifling lesion in the brain could kill a patient, and that he had been obliged sometimes to hunt for lesions in order to find that which was the cause of death.

Dr. HOLT said it had always seemed to him not fair to assume that because a patient recovers it is not a case of tubercular meningitis, for we see recoveries from tuberculosis elsewhere, as in tubercular disease of the bones and pulmonary tuberculosis, and therefore we should never hesitate to attack one of these cases with the hope of curing it.

Dr. VAN SANTVOORD asked if, in cases of recovery from pulmonary tuberculosis and tubercular disease of bone, Dr. Holt would not expect to find some lesion at the autopsy.

Dr. HOLT said he did not wish to imply that there was no lesion, but that some trace of the disease would be found.

The PRESIDENT said he was acquainted with a case in which the patient, a man 43 years of age, was under Dr. Janeway's care, who considers that he is now suffering from tubercular meningitis and has been for a considerable length of time.

Dr. PRUDDEN thought it was dangerous to draw an analogy with reference to tubercular meningitis from the healing of lesions in the lungs, because the only way in which the pulmonary cure is effected is by the process going on to fibroid degeneration.

Dr. HOLT would like to direct attention to the occurrence of simple dysentery in young children. This was the third autopsy which he had made within two weeks in which there was simple dysentery disconnected with any other lesion in the intestine. Goodhart states that simple dysentery is extremely rare apart from lesion of the small intestines. In the two cases mentioned the dysentery was largely follicular.

Dr. VAN SANTVOORD had seen considerable dysentery in children, but it had usually been follicular; indeed, he did not recall a case in which he had seen croupous dysentery.

NEW YORK ACADEMY OF MEDICINE.

THE Annual Meeting was held January 6, 1886, A. JACOBI, M.D., President, in the chair.

The President read the names of a number of gentlemen who had declined nominations for office. At the close of the balloting, the following were declared duly elected:

Vice-President, Dr. Henry D. Noyes; Corresponding Secretary, Dr. Wesley M. Carpenter; Treasurer, Dr. W. F. Cushman; Trustee, Dr. George A. Peters; Committee on Admission, Dr. J. H. Emerson; Recording Secretary, Dr. A. M. Jacobus; Committee on Library, Dr. W. H. Katzenbach and Dr. Laurence Johnson; Delegates to the State Medical Society, Drs. W. R. Birdsall, R. W. Amidon, A. S. Hunter, W. E. Bullard, and Gorham Bacon.

CONTAGIOUS DISEASES IN ASYLUMS AND RESIDENTIAL INSTITUTIONS.

Dr. R. H. DERBY, of the committee appointed to make investigation with regard to contagious diseases, particularly eye-diseases, in asylums and residential institutions, said the reports of those physicians appointed to visit the institutions represented them in a less favorable condition than they were in June last. In three asylums in the city, containing collectively about one thousand inmates, there were near three hundred cases of contagious eye-disease. Overcrowding, bad drainage, want of place for quarantine, were noticeable. The committee recommended that the influence of the Academy be exerted upon the Legislature towards the passage of a bill which had been kindly drawn up by Mr. Gerry, of the Society for the Prevention of Cruelty, and of which the following are the essential features:

That every incorporated institution in this city receiving children shall have attached to it a physician whose duty shall be to examine every child before admission, and give a certificate in writing that the child is a safe and proper subject to be accepted into the institution, being without contagious or infectious disease, especially of the eyes. Any inmate with contagious or infectious disease shall be placed in quarantine for ten days, to be released then only on recommendation of the physician. It shall be the duty of the physician at least once a month to inspect thoroughly the entire institution and report to the Board of Health. The beds shall be separated by a passage not less than two feet horizontally, and free ventilation secured. The minimum amount of air for each inmate in the dormitory shall be six hundred cubic feet. Any official refusing to comply with this act shall be guilty of a misdemeanor. This act to take effect on the first day of July, 1886.

On motion, the recommendation was adopted and the committee continued.

The annual reports were then received. According to the Treasurer's report, there was a balance in the treasury of eight hundred and eighty dollars, and no debt. The entire number of volumes in the library, including pamphlets and medical journals, was twenty-seven thousand.

CHANGES IN CONSTITUTION AND BY-LAWS.

The most important changes made related to the abolition of the Committee on Ethics; the Committee on Medical Education was also abolished.

On motion of Dr. AGNEW, the following was adopted as a part of the By-Laws:

"The Council shall, on a written statement signed by the complainant and duly forwarded through the Secretary, take cognizance of any complaint against a Fellow. The Council may, after investigation, dismiss the complaint or transmit its findings thereon for further action by the Academy."

REVIEWS AND BOOK NOTICES.

VON ZIEMSSEN'S HAND-BOOK OF GENERAL THERAPEUTICS. In Seven Volumes. Vol. I. Introduction by PROFESSOR H. VON ZIEMSSEN. On the Dietary of the Sick and Dietetic Methods of Treatment. On the Koumiss Cure. Vol. II. Antipyretic and Antiphlogistic Methods of Treatment. Epidermic, Endermic, and Hypodermic Administration of Medicines. Vol. III. Respiratory Therapeutics. New York, William Wood & Co., 1885.

This work has been written for the well-educated and scientific physician, who will find in its pages much that is valuable and suggestive with regard to the nature and rational treatment of morbid conditions. In accordance with the teachings of modern medicine, which awards a high place to dietetics in the treatment of disease,—reviving the principles of the famous school of Salernum,—a treatise upon Dietary of the Sick and Dietetic Methods of Treatment, by Professor J. Bauer, and a chapter on the koumiss cure by Dr. Stange, with a general introduction to the work by Professor H. Von Ziemssen, appropriately occupy the first volume of the series. The food-value of each article is first considered, in order that a dietary may be constructed for special cases. With regard to the food-value of alcoholic liquors, the opinion is expressed that "their favorable effect in many diseases is satisfac-

torily explained if we regard them solely as excitants and stimulants,—those especially which contain no appreciable constituents other than alcohol and water,—and estimate their nutritive properties as insignificant."

Liebermeister, Jürgensen, and Eulenberg contribute the essays which constitute the second volume, on Antipyretic Methods of Treatment, Antiphlogistic Methods of Treatment, and on Epidermic, Endermic, and Hypodermic Administration of Medicines, respectively. At the present day, when so much attention has been directed towards the treatment of fever and inflammation, and when especially the scientific status of venesection is under dispute, and when hypodermic and epidermic methods of administration are largely practised, their able and systematic treatment will be gladly welcomed. The translator, Mr. Matthew Hay, of Aberdeen University, has added a note upon some new antipyretics, and has made suggestions which considerably add to the value of the work.

Respiratory Therapeutics, by Professor M. J. Oertel, constitutes Volume III., which has been translated, with notes and a preface, by J. Burney Yeo, of London. In this not only the therapeutics of diseases of the air-passages are considered, but also the respiratory disorders accompanying organic disease of the organs of circulation. The *modus operandi* of the various methods of treatment is fully considered, as well as the drugs required in respiratory therapeutics.

The publication of these volumes indicates a highly-satisfactory condition of modern therapeutics, which is now more than ever approaching scientific exactness of application. The volumes are illustrated and well printed. As a work of reference, this Hand-Book promises, when complete, to comprise everything of value within its scope, and well deserves to be found in every medical library worthy of the name.

THE PRACTICE OF PHARMACY: A Treatise on the Modes of Making and Dispensing Officinal, Unofficinal, and Extemporaneous Preparations, and Descriptions of their Properties, Uses, and Doses. Intended as a Hand-Book for Pharmacists and Physicians, and a Text-Book for Students. By JOSEPH P. REMINGTON, Ph.G., etc. With nearly Five Hundred Illustrations. Philadelphia and London, J. B. Lippincott Company, 1885. 8vo, cloth, pp. 1080.

This work is encyclopædic in fulness, and within the limits of a single volume comprises a pharmaceutical reference-library. The various subjects are considered systematically and compendiously in sixty-eight chapters, the work being divided into six parts for convenience of study and to facilitate reference. The technics of pharmacy and the various methods of manipulation are considered quite fully in the first part; while in the second the student is made familiar with officinal pharmacy and pharmacopœial methods. Part three considers inorganic substances, and part four organic drugs; extemporaneous pharmacy is treated of in part five; while the concluding part contains a useful formulary of unofficinal preparations. The work is profusely illustrated, and the book is well printed and bound in admirable manner, as becomes a work of reference. This book will find a welcome place on the book-shelf of every physician, as well as of every pharmacist.

A GUIDE TO SANITARY HOUSE-INSPECTION; or, Hints and Helps regarding the Choice of a Healthful Home in City or Country. By WILLIAM PAUL GERHARD, C.E., Consulting Sanitary Engineer. New York, John Wiley & Sons, 1885. Cloth, 12mo, pp. 145.

The English language, rich in the possession of the word home, contains many qualifying expressions, such as a happy home, the home of refinement, comfort, even of luxury, but the idea is rapidly developing in the community that health must take precedence of all other considerations, and that in order to enjoy life a healthful home is the prime necessity. The cause to which the melancholy fact that so many dwelling-houses have serious defects of construction is to be attributed is ignorance,—ignorance, especially on the part of the householder, of the requirements for safe habitation, and ignorance as well as cupidity on the part of the plumber and "skin builder." The present volume is a sanitary tract for the householder and sanitary inspector. The necessity of such inspection is made evident by a perusal of this work, which is clearly written, and contains advice which, if intelligently followed, will be worth many times its cost.

NEW BOOKS.

CLINICAL THERAPEUTICS. Lectures in Practical Medicine, delivered in the Hospital at St.-Antoine, Paris, France. By Prof. DUJARDIN-BEAUMETZ. The Treatment of Nervous Diseases, of General Diseases, and of Fevers. Translated by E. P. HURD, M D Detroit, Michigan, George S. Davis, 1885. Cloth, 8vo, pp. 491.

TABLETS OF ANATOMY. By THOMAS COOKE, F R.C.S. Eng. Fourth Edition; or, Selection of Tablets believed to be most useful to Students generally. Longmans, Green & Co., London, 1885. For sale by J. B. Lippincott Company.

PRACTICAL NOTES ON THE TREATMENT OF SKIN-DISEASES. DISEASES OF THE PERSPIRATORY AND SEBACEOUS GLANDS. By GEORGE H. ROHÉ, M.D. Baltimore, 1885. 12mo, paper, pp. 62.

ELECTRICITY IN MEDICINE. Illustrated. By AMBROSE L. RANNEY, M.D. New York, D. Appleton & Co. Cloth, 12mo, pp. 147.

HOW WE TREAT WOUNDS TO-DAY. By ROBERT J. MORRIS, M.D. New York and London, G. P. Putnam's Sons, 1886. Cloth, 12mo, pp. 160.

PSYCHIATRY: A CLINICAL TREATISE ON DISEASES OF THE FORE-BRAIN, BASED UPON A STUDY OF ITS STRUCTURE, FUNCTIONS, AND NUTRITION. By THEODORE MEYNERT, M.D. Translated (by authority) by B. SACHS, M.D. Part I. The Anatomy, Physiology, and Chemistry of the Brain. Illustrated. G. P. Putnam's Sons, New York and London, 1885. Pp. 285.

BASIC AURAL DYSCRASIA AND VASCULAR DEAFNESS. A New System of Aural Therapeutics and Pathology. Also Notes on the Deafnesses. By ROBERT HOOPER, M.D. Ballière, Tindall & Cox, London, 1886.

CLINICAL NOTES ON UTERINE SURGERY. With Special Reference to the Sterile Condition. By J. MARION SIMS, A.B., M.D. Memorial Edition. Wm. Wood & Co., New York, 1886.

THE FIELD AND LIMITATION OF THE OPERATIVE SURGERY OF THE HUMAN BRAIN. By JOHN B. ROBERTS, M.D. P. Blakiston & Co., Philadelphia, 1885. 8vo, cloth. Pp. 80.

WOOD'S LIBRARY:

CLIMATOLOGY AND MINERAL WATERS OF THE UNITED STATES. By A. N. BELL, A.M., M.D. (October.)

DISEASES OF THE LUNGS. By PROFESSOR GERMAIN SÉE. (November.)

DISEASES OF THE BRAIN AND SPINAL CORD. By W. R. GOWERS, M.D., F.R.C.P. (December.) Wm. Wood & Co., New York, 1885.

WOOD'S POCKET MANUALS:

CUTANEOUS MEMORANDA. By HENRY G. PIFFARD, M.D.

VENEREAL MEMORANDA. A Manual for the Student and Practitioner. By A. MORROW, M.D.

MISCELLANY.

LODGING-HOUSE SANITATION.—The Board of Health in New York has been taken to task quite severely by the sanitary police for its failure to enforce the laws requiring a certain number of cubic feet of air for each lodger in the licensed lodging-houses of the city.

It is said that about half the houses are conducted with entire disregard of the law, and the Board of Health does little to enforce it. About three hundred judgments were obtained last year against persons for infractions of the sanitary laws of various kinds, but only three of these were satisfied. This remarkable result was brought to the attention of the grand jury some months since, and was criticised by them strongly; but still little was done to improve matters.

USE OF HYDRASTIS IN DYSPEPSIA.—Mr. A. G. Auld (in the *Lancet*, November, 1885, p. 885) speaks very positively of the specific influence of hydrastis in small doses in that form of dyspepsia common among females, where there is pain and sinking at the epigastrium, with nausea and constipation, associated with general debility, nervousness, wandering pains, and possibly leucorrhœa. The dyspepsia of phthisis and cancer is also amenable to the drug, as well as that form of indigestion resulting from alcohol. A very valuable editorial article on the use of hydrastis in various diseases is published in the *Brit. Med. Jour.*, August, 1880, p. 746; vide *Medical Digest*, Sec. 470: 3.—*London Medical Record.*

HYOSCYAMINE HYDROBROMATE, and also other products of Merck's laboratory, are imported and sold by Messrs. Eisner & Mendelson, of this city, who import from sixteen thousand to twenty thousand marks' worth of Merck's chemicals every month. This announcement is made in justice to an enterprising Philadelphia firm, because in a paper recently published in these columns it was implied that those who required these drugs would be obliged to go to New York for them. They are also to be found at our leading retail drug-houses.

LOCAL CAUSES OF FETID BREATH.—Chronic follicular tonsillitis, ozæna, and catarrh of the tongue are, according to McBride, prominent among the local conditions producing bad breath. The catarrh of the tongue which often accompanies dyspepsia may be successfully treated by applications of nitrate of silver dissolved in nitrous ether. Michel has recommended concentrated acetic acid for this purpose.—*Edinburgh Medical Journal.*

POST-PARTUM HEMORRHAGE.—In the *Lancet*, a correspondent writes that, being engaged to attend a patient who was accustomed to severe flooding after labor, he gave, in anticipation of hemorrhage, five grains of gallic acid twice a day for three weeks. So soon as the placenta came away no more blood was lost, though in previous confinements almost fatal flooding had followed, in spite of every treatment.

NEU-YORKER MEDIZINISCHE PRESSE.—A new monthly medical journal has been started in New York, as the special organ of the Medico-Chirurgical Society of German Physicians of the City of New York and Vicinity. It is ably conducted, and will be welcomed by German physicians.

AN extract from Ziemssen's Cyclopædia, by the celebrated Professor Juergensen, on Catarrhal Pneumonia, as appearing in advertising columns of this issue, may be of interest to our readers.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 3, 1886, *TO JANUARY* 16, 1886.

COLONEL THOMAS A. MCPARLIN, SURGEON.—Now awaiting orders in New York City. Ordered for assignment to duty as Medical Director Department of the Platte, on January 24, 1886. S. O. 5, A. G. O., January 7, 1886.

MAJOR CHARLES E. GODDARD, SURGEON.—Died at Fort Yates, Dakota Territory, January 4, 1886.

CAPTAIN CURTIS E. MUNN, ASSISTANT-SURGEON.—Ordered from Department of the East to Department of the Columbia.

CAPTAIN WILLIAM C. SHANNON, ASSISTANT-SURGEON.—Ordered from Department of the Platte to Department of the East.
S. O. 4, A. G. O., January 6, 1886.

FIRST-LIEUTENANT W. D. MCCAW, ASSISTANT-SURGEON.—Relieved from duty at Fort Lyon, Colorado, and ordered for duty at Fort Leavenworth, Kansas. S. O. 1, Department of Missouri, January 4, 1886.

LIEUTENANT-COLONEL EBENEZER SWIFT (Retired).—Died near Hamilton, Bermuda, December 24, 1885.

PHILADELPHIA, FEBRUARY 6, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE.

HOSPITAL COLLEGE OF MEDICINE, LOUISVILLE, KENTUCKY.

SERVICE OF DUDLEY S. REYNOLDS, M.D.,
Professor of General Pathology, Hygiene, and Diseases of the Eye and Ear.

Reported by ALLEN KELCH, M.D.

CASES ILLUSTRATING DEFECTS OF REFRACTION, WITH REMARKS.

MRS. C., æt. 38, has worn glasses fourteen years. She has never been able to see fine type, she says. She considers herself blind in the left eye, being able to see light only. She cannot tell a man from a woman at any distance with this eye. She has frequent attacks of harassing sick-headache, lasting for several days at a time. She is often nauseated and made sick by attempts to read or to sew. She cannot go in the street without glasses. Suspending her accommodation with homatropine, the glasses she wears enable her to read $\frac{20}{LXX}$ with the right eye and nothing with the left. After careful testing of the right, it was found that she could see in meridian 105° with $+\frac{1}{30}$, $\frac{20}{XX}$. Revolving the disk to 15°, she still saw $\frac{20}{XX}$. Removing the stenopaic disk, $+\frac{1}{30}$S allowed the patient to see $\frac{20}{LXX}$ only. Going over this several times without obtaining a different result, I placed two cylinders, each $+\frac{1}{30}$, with their axes at right angles before the eye, and instantly the patient saw $\frac{20}{XX}$. This, so far as I know, is the first symmetrically quadratic eye which has been fully corrected.

Testing the left eye, I was able to develop $\frac{20}{L}$ with $+\frac{1}{24}$ cylindrical axis 95°, combined with $+\frac{1}{12}$ spherical. Considering that this eye had never before been able to distinguish objects, not even to recognize the difference between a man and a woman at arm's length, I regard this result as being quite remarkable. The lady is quite intelligent, and is the wife of one of our most prominent ministers. The correcting-lenses being constructed after the formulæ above stated, the patient is now able to read the smallest type and to see all ordinary objects, and, in fact, enjoys not only normal acuity of vision, but perfect comfort in the use of her eyes.

This case is presented for the purpose of directing your minds to the consideration of defects of refraction in the eye. She had been to see a number of the most prominent specialists in the country, each of whom prescribed glasses. I took the pains to measure the glasses which she said suited her best, and which she had long worn, and I found the one for the right eye compounded as follows: $+\frac{1}{24}$c axis 75°, combined with $+\frac{1}{18}$c. In the left eye she had $+\frac{1}{18}$c axis 100°. For what reason this latter glass was prescribed I was not even able to conjecture, as the patient could see no object with it whatever. With the combination just stated she read $\frac{20}{LXX}$ with the right eye, whereas with two + cylinders—each of only $\frac{1}{30}$—set at right angles, the one at 105° and the other at 15°, she actually saw $\frac{20}{XX}+$.

Case II.—The gentleman before you—Mr. S., of Mississippi—wrote me some time ago that he had long been the subject of granular lids, and had been treated by quite a number of physicians in that section of the country, and went on to say that he was able to read for a short time in the day only. He was the subject, on any prolonged attempt at study, of very severe headaches, often confining him to bed, and sometimes to a dark room, for several days at a time. He wished to know the prospect of recovery in case he should come to Louisville. I wrote him that I doubted his having granular lids, but that nothing short of personal examination would enable me to form an intelligent opinion of his case, and advised him to come. He arrived in the city Saturday at noon. When he called at my office, on everting the lids I found hyperæmia,—mere suffusion of the conjunctiva lining the lids, without any evidence whatever of inflammation.

Suspending his accommodation, I found him utterly unable to distinguish any object on the test-card at twenty feet. He is here now at my special request, that you may witness the details of determining the state of his refraction. You observe this instrument, which has two catch-frames, with a sliding arrangement, so as to approach or separate at will. Each of

these catches has three grooves just suited to hold the lenses in Nachet's test-case. The faces of each of these semicircles are graded in degrees from 0 to 180. They represent half-circles revolved to the right. Placing Donders's stenopaic disk in the central groove and revolving it so as to bring the slot directly into the vertical meridian, and placing, as you see, $+\frac{1}{24}$ in the outer groove from the patient's eye, he sees $\frac{20}{XX}$. Revolving the disk to 180°, he is not able to see any character on the card. By experiment, you observe that with $-\frac{1}{24}$ he reads $\frac{20}{XX}$ in this meridian. Now, how shall we construct a spectacle-lens which shall represent the combined powers of these two lenses? The answer is simple. Of course the piece of glass out of which the lens is to be made has two surfaces, and we shall have one of these ground to represent $+\frac{1}{24}$ axis 180°, and the other at right angles to represent $-\frac{1}{24}$. Thus the combination is completed. Fortunately for Mr. S., you observe, the left eye is precisely like the right in its abnormal refraction. The next step is to determine the distance between the pupils and the height of the bridge of the nose. He measures two and three-eighths inches from the centre of one pupil to the centre of the other, as he gazes steadily at the bridge of my nose about eighteen inches from his face. Now, if he looks at the wall over my head the distance between his pupils is two and a half inches. This is a very important matter for consideration in ordering compound lenses, or in fact any kind of lens for the purpose of reading and out-door use. In reading the eyes converge, and in gazing at distant objects the eyes permit the lines of vision to lie in parallels. The difference between the adjustment of the eye for distant objects and for near objects is generally about one-eighth of an inch. The glasses for this gentleman for reading should be two and three-eighths inches between the centres, while if he wears them for out-door use they are likely to fatigue the eyes unless he has another pair set in frames two and a half inches between centres. There is nothing peculiar about the bridge of his nose. The ordinary curve found in oval spectacle-frames, therefore, will answer his purpose. As he has a moderately long neck, and is able to raise the chin and toss the head back with ease and comfort, the same character of frame which he uses for reading may be worn for distant vision. If the bridge of the nose were very high he would require a deeper curve in the frame for reading than for distant vision, while if it were very low it might be necessary to have no groove in the bridge at all in the frames for distance, while those for reading might drop down to the cheek without touching the nose at all.

There is a serious objection to setting lenses in the pinch-nose frames, because they are seldom adjusted in such a manner as to permit the lenses to lie directly before each eye, that the patient may see through the centre, and because they are never even approximately in the same plane.

It requires a great deal of care to adjust spectacles properly. The eye must see through the centre of the lens, and the lens must occupy a plane at right angles to a line drawn from the centre of the pupil to the surface of the object, and the object itself should lie in a plane parallel to that occupied by the lens and at right angles with the line of vision. The light should always come from above and to one side, or, as it is commonly expressed, over the shoulder. The glasses should be as close to the eye as possible without touching the lash. If for reading, the two glasses should not be in the same plane, but should intersect the line of vision precisely at right angles. This may be accomplished by so bending the bows as to make them press firmly against the sides of the head, causing the bridge of the frame to spring just sufficient to place each lens in the desired position before each eye, whereas, on the other hand, in adjusting glasses to see distant objects the two lenses should occupy the same plane.

If these rules be not observed, any discrepancy in the distance between the centre of the lens and the axis of vision will overtax the muscles of the eye to overcome the prismatic effect of the abnormally adjusted lens; or if the muscles are not able to resist the prismatic effect thus produced, double images appear to harass and annoy the patient. It may seem to be a great deal of trouble to observe all these details in the mere matter of adjusting spectacles; but a careful observation of them will be necessary to secure the best results. It is a matter of some importance in prescribing glasses that you should be

able to obtain the glasses for measurement, and to show the patient the proper methods of adjustment. In a carefully-recorded experience extending through nearly a quarter of a century, I can truthfully say that not one in three hundred will adjust the glasses properly without instruction, and that it is rare indeed that any one, except a well-trained, practical optician, can fill even the simplest order for spectacles correctly. You are to understand that jewellers are not opticians, and that the spectacles peddled about the country, as well as those kept in all notion-stores and jewelry-establishments, are exceedingly unreliable. They are sold by numbers, and it is the rarest thing to find the two lenses in one frame of exactly the same refracting power. It is rare also to find lenses symmetrically ground, and rarer still to find them made of a good quality of glass, which will not become colored on exposure to the light. The proper material for spectacle-lenses is crown glass, and not quartz, or pebble, as it is sometimes called.

TREATMENT OF NASAL POLYPI BY INJECTIONS.

Case III.—Mr. William M., æt. 28, came here two weeks ago with a peculiar voice, which at once suggested obstruction of the nose. Examination revealed chronic muco-purulent inflammation in the right nostril: the left was completely filled with gelatinoid polyps.

Nasal polypus has long been a part of *opprobria medicorum*. Various kinds of forceps have been invented for the purpose of seizing the tumor and drawing it out bodily. This, of course, could never succeed in removing the entire tumor with its pedicle, yet it always succeeded in doing more or less damage to the previously inflamed portions of the nasal membrane, and even denuding, wounding, or even crushing the turbinated bones. Different kinds of scissors have been devised for cutting off the pedicle, but, as with the negro who was congratulating himself upon the feast of broiled rabbit, the game has not yet been caught.

If the pedicle could be reached with unerring certainty, there could be nothing more simple than to clip it asunder with scissors. Unfortunately, however, the pedicle is seldom in sight.

Different kinds of snares and écraseurs have afforded temporary joy to their too enthusiastic inventors, with a modicum of comfort to the patient. Quite recently I was amused to read an account of a novel method of removing polyps from the nose. The inventor of this new plan treated the subject as though the only object in view in the treatment of such cases was simply the mere expulsion of the polypus. Accordingly, he used an instrument similar to Bellocq's canula, and, placing a quantity of old linen torn into strips in the loop, he drew this mass of old rags up through the posterior nares, when, by making a sudden jerk, he announced that the polypus could be shot out of the nasal passages, much as the wad is expelled from a popgun.

He seemed to regard this as a great achievement in surgery. The sweet simplicity which apparently clustered about the ignorance and the illiteracy of the author of this novel device is, to my mind, in charming contrast to the able adventurer who, with a galvano-cautery, undertakes to clean out turbinated bones, polypi, and all with a simple touch of the electric fire.

To be plain, gentlemen, the treatment of polypus of the nose is a serious matter. It requires much time and patience not merely to remove a polypus, and in that way produce some temporary relief to the patient from the mechanical obstruction to nasal respiration, but to change the nutrition of the membrane upon which these pestiferous growths are developed. Swelling in the nasal membrane, causing close and firm apposition on opposite sides of the crypt, causes accumulation of mucus in the follicles. One or more of these presently dilate, and, once the connective-tissue walls begin to yield, it presently ruptures, and a commingling of mucus and lymph rapidly distends the submucous cellular tissue, until presently a well-defined pedunculated growth is made to project into the previously open space. The nature of the pressure may cause two or more of these growths to develop near the same site, and, unless obliteration of the sac or its complete extirpation be practised, rapid reproduction of the growth must necessarily follow.

Considerable experience with different kinds of caustic or other injecting-fluids thrown into the body of polypoid growths in the nose has gradually led me into the habit of relying almost exclusively upon this means of destruction and removal.

I usually begin, as I did in this case, with

the injection of from one to three minims of liquefied pure carbolic acid, which I throw into the body of the tumor through the hypodermic-syringe needle, made especially long and bent at an angle of twenty-five degrees near the point of attachment to the barrel. This needle is straight from the point back three and a half inches, and is very convenient for the purpose of injecting nasal polyps. I have injected Mr. M.'s polypus in two different places on previous occasions. You now observe that he is able to breathe freely through the left nostril, and exhibits in his voice none of the signs of obstruction which characterized his first appearance here. There are still, however, a few little irregular fringe-like projections from the lower margin of the middle turbinated bone. With some difficulty reflected light may be focused at the point where these bodies are situated, and, as you see, I am now able to inject the liquid carbolic acid without permitting any of it to run down into the pharynx or forward into the nose. While the point of the needle is still within the body of the largest one of these polypoid masses, he says he feels but slight pain, not at all severe, and, by waiting fifteen or twenty seconds after the injection of the fluid, the needle may be slowly and cautiously withdrawn without letting out any of the carbolic acid, and without producing any hemorrhage beyond the slight oozing of bloody serum. The carbolic acid instantly coagulates the contents of the polyp, while the investing membrane is quickly inflamed, and in about forty-eight hours from the time of the injection it is usual for the main part of the injected growth to come away *en masse*, completely sphacelated.

The spray through a glass tube of the saturated ethereal solution of iodoform may in many instances be advantageously employed just after the slough has separated. Where the discharge is very tenacious, the use of tannin dissolved in Listerine is desirable. It may be employed in saturated solution with a mop made of cotton-wool rolled upon the end of a probe, so as to pass readily to the exact spot which it may be desired to touch, or the solution may be diluted with distilled water in any proportion and sprayed into the nose. It coagulates the lymph instantly, and is not followed by any painful irritation. It is especially useful in cases where the discharge is profuse and there exists a tendency to form such accumulations as would obstruct the passages and shut out the air from the nasal membrane.

It is probable that the injection practised a moment ago will be the last Mr. M. will require. Yet it will be necessary to touch the points where the pedicles grew from the surface of the membrane, at different times, with pure carbolic acid, or, if the tendency to vegetation resists that, a little chromic acid carefully applied, taking care always to touch no other part than that which it is desired to destroy by the caustic.

Some cases of polypus exhibit a tendency to frequent hemorrhages, especially of the remaining pedicle after the body of the polypus has been destroyed by caustic. Injection into the bleeding pedicle of the officinal compound tincture of iodine, or of iodine in solution, will be followed by rapid shrinking of the vascular mass and permanent relief of the hemorrhagic tendency.

In the case of Mr. M., a powder, compounded according to the following formula,—

℞ Sodii boratis, ʒj;
Sodii chloridi, ʒij;
Cubebæ, gr. v.
M. Ft. pulv.,—

shall be used by the patient as a snuff at intervals sufficiently short to prevent accumulations of matter in the nasal passages. This powder creates no pain or other uncomfortable sensations, and may be freely snuffed up into the nose, drawn back into the pharynx, and hawked out.

ORIGINAL COMMUNICATIONS.

FOREIGN BODIES IN THE VITREOUS.*

BY E. MEIERHOF, M.D.,

Professor of Diseases of the Eye and Ear in the Baltimore Medical College.

F. S., aged 22, sheet-iron worker, was engaged in riveting boiler-plates, when a piece of steel from the button-set used in forming heads on rivets flew off, striking the outer and upper ciliary region about two mm. behind the sclero-corneal margin. I saw the patient about an hour after the accident, and

* Read before the Clinical Society of Maryland.

the eye presented the following appearances. At the point where the eye was struck, a wound, causing a bit of iris to prolapse in the opening, was seen; the anterior chamber was slightly cloudy, but it was impossible to see much beyond this, as the vitreous was bloody. The patient complained of little or no pain. The eyeball was quite soft, and vision equalled quantitative perception of light. The patient was ordered a one-per-cent. solution of sulph. atropine, and the application of iced pledgets of linen to the external surface of the lids, and to remain at rest in a horizontal position in a darkened room. The next day the eye was improved in its appearance, the night previous having been spent without any pain. The vitreous was slightly clearer; a number of small floating bodies, supposed to be coagulum, indistinctly seen in the vitreous. Vision equalled fingers at four feet. On the fifth day a dark-looking body was seen in the anterior part of the vitreous. The prolapsed iris was reduced, and the eye had lost much of its softness, with the vision $\frac{14}{200}$. On the sixth day the dark-looking object had changed to a bright, reflecting, rectangular-shaped piece of metal, apparently five mm. by three mm., the thickness of which it was difficult to estimate, except judging by the knife-like wound made in piercing the sclera. The foreign body was apparently just behind the lens, resting in the lower part of the vitreous. It moved freely when the eyeball was rotated. Vision $= \frac{20}{200}$. The retinal vessels could be seen indistinctly in the erect image in outer field only. The lens does not appear to have been displaced or injured. The day following this the foreign body seems to be surrounded with a veil. An operation for the removal of the piece of steel was advised immediately upon discovering it, to which the patient and his friends assented two days afterwards. Upon the tenth day after the infliction of the injury an operation after the following method was performed. A four-per-cent. solution of the hydrochlorate of cocaine was instilled into the conjunctival sac after the regular method. As the position of the foreign body when at rest was on a plane parallel to the iris, it was deemed best to make the scleral incision in such a manner as to produce the least disturbance of the contents of the eye. With the kind assistance of Drs. S. Frank and H. M. Simmons, I made an incision parallel to the edge of the foreign body, on the outer and lower portion of the globe, about four mm. behind the sclero-corneal margin, with a Von Graefe cataract-knife. The incision made was about five mm. in length. The tip of Gruening's permanent magnet was introduced into the opening made, which at once attracted the metallic body to the opening; and upon seizing the body with a pair of fine clot-forceps it was found impossible to draw the chip through without considerable dragging: so it was deemed advisable to enlarge the incision, which was done with blunt-pointed scissors. The second attempt was again successful in attracting the chip and drawing it easily through the opening. The incision, amounting to about six mm. in length, was closed by means of a deep conjunctival suture, which was sufficient to keep the edges of the wound in approximation. There was comparatively no hemorrhage, but the incision gave rise to considerable pain. Cocaine was of use only in allowing the speculum to remain in position without discomfort, allowing the conjunctiva to be seized, and preventing hemorrhage. The patient was kept in bed, with the resumption of iced pledgets and atropine. At night $\frac{1}{4}$ grain of morphine was ordered, to insure sleep. The case went on to recovery, so that at the end of three weeks the vision in the injured eye equalled $\frac{20}{40}$, or one-half, but the eye has never recovered its normal tension. The piece of steel, as will be seen, is quite large in its dimensions, being about 3 mm. by 5 mm., and weighing 68 mgr., or $1\frac{18}{100}$ gr.

It is a pity to throw a wet blanket on this brilliant result, but nevertheless it is my duty to state that two months after the operation my patient paid me a visit, complaining of the loss of vision in his injured eye, which upon inspection was found to be due to an almost complete detachment of the retina. He says it followed a drinking-spell one day when he imbibed about a pint of whiskey, which he states did not intoxicate him. There was at the time quantitative perception of light in the outer field. Whether the drinking fostered the retinal lesion it is impossible for me to say, but it is possible the detachment may have been produced by cicatricial changes caused by the injury and that following the operation, besides there being fluid vitreous. I omitted to mention a little experience with the wound. As stated before, a deep conjunctival suture was inserted, which was removed on the third day, as it did not seem to be of any further service; on the fifth day, there being a bead of vitreous which seemed to keep the wound from uniting, I inserted a second suture as before, with the result of having the wound to close two days later.

In June last there appeared one of the most authoritative articles on this most important subject by Professor Hirschberg, of Berlin, who has given us his splendid monograph "On the Electro-Magnet in Eye-Surgery," based on the experience of thirty-two cases of his own, together with

that of all the cases reported up till the issuance of his work. What had been written before on this subject was generally the report of cases by a number of operators; but the experience of Hirschberg is very extensive. His monograph contains so many valuable suggestions that I thought it would not be amiss to mention some.

He says the indications for operating cannot be precisely defined, except that the operation is best done early for the removal of foreign bodies in the eye. If a patient is seen in the first stage, which is within twenty-four hours after the injury, it is best to operate without delay. If the opening lies in the cornea, and especially near its margin, a scleral section is best; and if the opening lies in the sclera at a proper distance from the cornea, the tip of the magnet may be at once introduced, provided the foreign body can be seen in the coagulum or through the cornea, enlarging the scleral section if necessary. If a scleral section is necessary, he advises the patient to be anæsthetized, on account of the great pain caused by the operation, which was the experience in my case. He advises a meridional section (as is usually done) to be made in the lower outer portion of the globe, measuring with a compass a distance of eight mm. from the margin of the cornea, and while an assistant rolls the globe upwards with a pair of strong forceps, plunges a Von Graefe knife several mm. deep into the vitreous at the distance mentioned, for the purpose, as he says, of opening a path to the foreign body through the vitreous, and then finishes the section by enlarging the incision towards the equator of the eye for a distance of six mm. The magnet is then introduced and left inside for a few seconds, and, if the diagnosis is correct, withdrawn with the foreign body attached. The conjunctiva is sutured over the incision and antiseptic dressings applied.

He speaks of the difficulties met in making a diagnosis: the chief one is in discovering the position of the foreign body. The second stage he defines as the stage of irritation, and up to the time when the latter may have increased to circumscribed or diffuse inflammation of the vitreous. The third stage is that when a new inflammation is excited months or years after all previous irritation has ceased, caused by a change in the location of the foreign body. In the second stage it is advised to operate at once. Regarding the third stage, he mentions a case in which, despite the presence of iron in the eye for sixteen years and a cataract and well-marked irido-cyclitis, the finest type could be read after the removal of the iron with the magnet.

When shall we extract iron through a linear or flap section at the margin of the cornea? (*a*) When the patient is young, the foreign body not far behind the lens, the cataract mature, and irritation has ceased; (*b*) when the lens has already been removed, or has been absorbed, and when only a thickened capsule is left behind.

If the foreign body is small and the eye is seen in the first or second stage, and the lens is only partially opaque, the scleral section is preferable; later, we can extract the lens when mature.

If the eye is ruptured for a distance of six to ten millimetres, the globe collapsed or half full of coagulated blood, the magnet performs a genuine surgical triumph in withdrawing a large piece of steel weighing from two hundred to five hundred milligrammes; but vision is not restored. A case is reported in which, despite panophthalmitis, the eye was saved after removal of a piece of iron weighing thirty-one milligrammes, and in another the same result was obtained after removal of a large piece of iron weighing one thousand and fifty milligrammes. As to the form of magnet, it is a well-settled fact that the electro-magnet is the one most useful and reliable: the permanent magnet is of limited utility only, portability being the greatest thing in its favor. There are several forms of electro-magnets which are useful, but Doerffel, of Berlin, makes an apparatus of zinco-carbon elements in a glass jar holding about one litre, the fluid to be renewed from time to time, and the energy tested before each operation, which seems to meet every indication. The apparatus will lift a piece of iron weighing five hundred grammes.

In the long list of extractions from the vitreous, Hirschberg has succeeded twice in obtaining excellent vision, once a remnant of vision, and twice in preserving the shape of the globe,—a great difference in favor of the electro-magnet, when, before its use, he did not succeed in saving a trace of sight when an attempt, either successfully or unsuccessfully, was made to remove

pieces of iron from the vitreous by purely mechanical means.

There is no doubt in my mind that the successes in the operation for removal of foreign bodies from the vitreous are overstated; that is, so far as the permanency of the result is concerned. If we could keep trace of the subsequent histories of cases operated upon, it would be found that the number of successes was diminished on account of later complications, for in the reports of some of the cases some time after the operation, detachment of the retina was reported to have taken place. We have made great strides in the treatment of traumatism of the eyeball and its contents resulting from injuries by foreign bodies, even though useful vision is not always preserved. Yet we should take into consideration the great danger an eye runs when containing a foreign body in its interior. Even though a long period may have elapsed and its action remained dormant, it nevertheless is liable to light up a most serious inflammation, involving not only the injured eye but also its fellow-organ. It is strange that more accidents of this character do not occur, considering the enormous number of people who are daily exposed in pursuing their avocations in the various mechanical arts. Means have been suggested for the prevention of these injuries, but it seems that such suggestions are practically ignored.

ARTIFICIAL CLIMATIC EFFECTS FOR "STAY-AT-HOMES."

Read before the Philadelphia County Medical Society, December 9, 1885,

BY SOLOMON SOLIS-COHEN, A.M., M.D.,

Chief of Clinic, Out-Patient Medical Department, Jefferson Medical College Hospital.

THE benefit to be derived by consumptives from prolonged residence or temporary sojourn in localities where the climatic conditions are favorable is a matter of every-day observation. Not all, however, of the army of sufferers—an army whose death-roll in the city of Philadelphia is more than one-fourth of all the adult deaths—are able to avail themselves of a change of climate. What can we do for those, the vast majority, whose domestic ties, business interests, or lack of means preclude the possibility of leaving home? Granted that the atmosphere of Florida, or Colorado, or the Adirondacks, or California, possesses health-restoring properties, would it not be desirable if we could so modify the atmosphere in which our patients live as to bring, as it were, Colorado or Florida or the Adirondacks to their dwellings? Or would it not be still more desirable if we could combine the most beneficial qualities of different climates, and so adjust them to the individuality of each case as to give the stay-at-home the benefits of Colorado, Florida, and California at one time, and in the midst of his family? The answer to these questions is an emphatic affirmative. Can we do this? To the latter question our affirmative must be qualified. We cannot accomplish all that we may desire: still, we can accomplish much. We cannot, of course, change out-of-door conditions. We cannot cause the sun to shine when forces, often beyond our ken and always beyond our control, have wrought it otherwise. We are as powerless to divert the course of the storm-cloud as King Knut to stay the sea. Therefore, we cannot send our patients out into the open air continuously,—a highly-appreciated advantage of certain climates, both warm and cold. Neither can we have our patients stay at home and receive the benefits conferred by change of scene, rest from ordinary avocations, freedom from annoying surroundings, and the other collateral advantages which going from home affords. But we can, by artificial changes of atmospheric pressure about our patients, or by modifications of the pressure of the air breathed by them, and the impregnation of the respired air with certain volatile medicaments, produce effects which approximate more or less closely some of the effects produced by residence in elevated regions at low barometric pressure, or at the sea-shore, or in pine regions, or among any of the other atmospheric qualities which may be considered beneficial in particular instances. While we cannot by these measures, which must be conducted intermittently and in-doors, rival a continuous life in the desired atmosphere with the concomitant benefits of out-door exercise, yet in certain cases we can more than compensate for this defect by the accuracy with which we can fit the properties of our artificial atmosphere to the requirements of the case in hand, by the ease with which

we can combine different desirable qualities not always found combined in nature, by comparative independence of the meteorological variations from which even the most favored climate is not exempt, and by our power to produce certain local effects to which climate alone is inadequate. And in all cases where going from home is out of the question, it certainly seems our duty to do what we can towards affording a modicum of that relief whose entirety is denied by circumstances.

The means at our disposal for the production of these artificial climatic effects are the compressed air-bath or rarefied air-bath; the intermittent inhalation of compressed air, or of rarefied air, or of ozone, oxygen, nitrogen, or nitrous oxide, or of a mixture of these gases with each other or with air; and the continuous inhalation of balsamic or antiseptic vapors, such as terebene, eucalyptol, benzoin, creasote, thymol, iodine, and their congeners. The air-bath, whether compressed or rarefied air be the medium in which our patient is immersed, whether the classical cabinet of Tabarie or some of the more recent modifications thereof be the device employed, necessitates the construction of a costly apparatus, and consequently cannot well be employed except at an institution specially devoted to such purposes. I shall not, therefore, dwell upon this or any other of the expensive plans for accomplishing similar ends, but shall present only methods to which every physician can readily resort.

Hauke, in 1870, constructed the first portable apparatus for the administration of compressed air by inhalation, and since his time many others have devised apparatus for the same purpose, the best of which is probably that of Waldenburg, modelled after the spirometer of Hutchinson. It consists of two cylinders, one of which, inverted, slides within the other, its motion being controlled by weights and pulleys,—in fact, the ordinary gasometer. The outer cylinder being filled with water, the air within the inner cylinder can be compressed by means of weights placed on top of it, or rarefied by means of weights suspended from the pulleys. Various attachments, gauges, scales, etc., permit of accurate clinical and physiological application and observation. Waldenburg's machine or Schnitzler's modification of it is expensive, is difficult to obtain on this side of the Atlantic, and is too cumbersome to be transported to and from a patient's house. Setting aside expense, for office use I do not think it can be improved upon. The little apparatus I have here (Fig. 1),

Fig. 1.

Cohen's compressed-air apparatus.

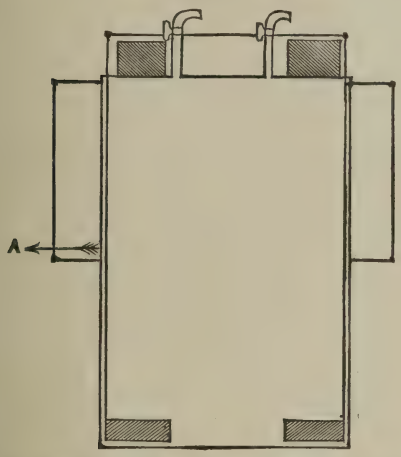
and which I explained in detail to the Society last year, is the outcome of a series of personal experiments* with many different devices. It is practically a Waldenburg apparatus cut down in size and in price. The original features consist of the manner in which the inner cylinder is weighted, and the manner in which the air is introduced. Instead of sucking the air into the inner cylinder by lifting the cylinder with weights, we pump it in from a foot-bellows. The equilibrium of the inner cylinder, which has neither flanges nor pulleys, is maintained by two weights placed upon shelves at the bottom (Fig. 2).

For detailed description and illustration, I would refer to last year's Transactions of this Society. This apparatus can be used only for administering inhalations of compressed air. It is not available if rarefied air be desired. I have had one of these machines in constant office use for more than two years, and find it perfectly satisfactory. Some few have been purchased for home use by patients residing out of town, and, as I have heard no complaints, I presume that they answer the purpose. The patient should stand, if able, while inhaling, with the head thrown

* I am indebted to Mr. Charles Richardson, of Queen & Co., for valuable assistance.

up and the shoulders drawn back. Sometimes it is advisable for the physician to

Fig. 2.

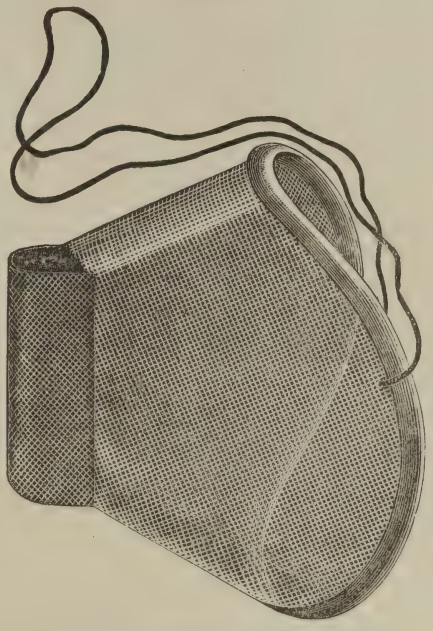


Section showing the manner of weighting. At the level of arrow *A* there is a row of perforations, to permit the escape into the overflow-tank of the water displaced by pressure.

gently press the shoulders backward or forward in harmony with the acts of respiration. From fifteen to thirty, or even forty, respirations can be taken continuously, after which there should be a rest of at least ten minutes before repeating the process. Two or three sets of respirations are enough for one visit. One or two visits a day are usually sufficient. The pressure employed varies from one-eightieth of an atmosphere (additional) to one-thirtieth of an atmosphere, the average being one-sixtieth of an atmosphere.

If desired to medicate the air, we pass it, as I show here, through a Wolff bottle, in which is placed, in addition to water, a drachm or two of the medicament desired,—in this case terebene. The little perforated zinc respirator* (Fig. 3) which I exhibit is essentially the same as that devised by Dr. Burney Yeo, of London, probably the best that has ever been offered to the profession. The sponge which is secured in front is saturated or impregnated with the desired solution, and the patient wears the apparatus for a number of hours continuously, at such intervals as convenience or necessity may dictate. With this modified Waldenburg, a Wolff bottle, a Yeo respirator, and a few ounces of terebene, creasote, eucalyptol, ethyl iodide, tinc-

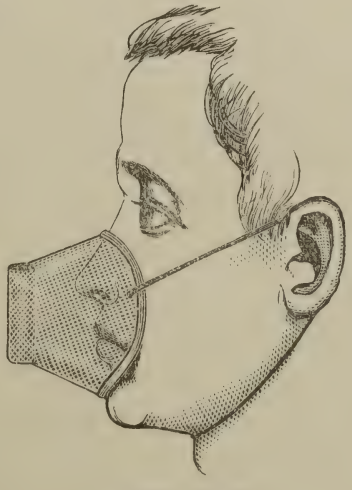
Fig. 3.



Perforated zinc respirator of Yeo (modified).

ture of benzoin, and spirits of chloroform, we can—not in all cases, but in many—

Fig. 4.



The respirator applied.

give our patients a very satisfactory substitute for the pneumatic effects of change of climate. Add to this armamentarium a

* As manufactured by Mr. Louis Genois, pharmacist, of this city, the respirator is slightly modified, according to a suggestion of Dr. J. Solis-Cohen, from Dr. Yeo's original pattern.

reservoir of oxygen gas and one of nitrous oxide, and we have all that can be desired in the way of respiratory therapeutics, in the vast majority of cases. A few words now as to what we can accomplish by some of these various methods.

As the subject of the evening is pulmonary consumption, I shall speak only in relation to that disease, and, as I said before, only of methods easily available.

The inhalation of oxygen gas, as a continuous and sole reliance, has failed in the experience of my preceptor and in my own experience to be of any permanent benefit. Resorted to occasionally, in the course of treatment by compressed air, to overcome temporary depression, or administered daily in connection with compressed air, it does seem to heighten the good effect; and, if we may judge of its action beyond sight by its action upon regions within laryngoscopic inspection, it may be considered to hasten the reparative—*i.e.*, cicatricial—process in softened or ulcerated areas. In the presence of active febrile process, oxygen is contra-indicated.

Inhalations of ozone, theoretically desirable, are highly spoken of by some observers and condemned by others. The reported effects are so contradictory that in the absence of personal experience I can simply allude to the subject.

Inhalations of nitrogen gas are said to diminish febrile action, to have a sedative effect upon an excited heart, to check cough and night-sweats, and to improve nutrition. I cannot as yet speak from personal experience. I have known valuable sedative effects, diminution of fever, and promotion of sleep, as well as temporary relief to irritative cough, to follow inhalation of a mixture of nitrous oxide gas and air.

The inhalation of compressed air distends unused air-cells and forces a proper expansion of the chest upon patients too weak to respire effectively unaided. In this respect it simulates, and indeed surpasses, residence at high mountain altitudes, where the rarefaction of the surrounding atmosphere relieves the pressure upon the thorax and permits expansion with less muscular effort. If at the same time that the patient inspire compressed air he is allowed to expire into rarefied air, the lungs can be better emptied, through relief from backward pressure, and subsequent inspirations are thus rendered deeper, the interchange of gases being at the same time greatly facilitated. In this way, the complemental air of inspiration being increased in quantity, and becoming, in fact, the tidal air, a greater amount of blood becomes exposed to an increased quantity of oxygen under pressure, the most favorable condition for absorption of oxygen by the hæmoglobin, and exhalation of carbonic acid is hastened. Thus depuration is favored and nutrition is increased. Regions of pulmonary tissue which have long been inactive are again brought into use, and healthy areas are stimulated to energetic function. Pent-up secretions, often decomposing, are stirred up, and finally expelled, reopening occluded lobules to the entrance of respiratory pabulum, and relieving the economy from the deleterious effects of the presence within an important viscus of effete and putrefying materials. The entire respiratory tract is subjected to a purifying and vivifying bath, and the muscular apparatus of the thorax undergoes a systematic gymnastic exercise. The effect upon the circulatory system of the modification of intra-thoracic pressure and the stimulation of intra-pulmonary capillary activity is to relieve tension and increase tonicity, steadying and strengthening the heart, which sends through both pulmonic and aortic systems an increased quantity of blood with lessened effort. These respiratory and circulatory effects reacting upon each other and upon nutrition in general, the ultimate result is an increase in vital capacity of the lungs often astonishing,—the clearing up of congested and occluded pulmonary areas, with in many cases absorption of inflammatory products,—and an increased power of both primary and secondary assimilation, as manifested by gain in strength and in flesh. The increased digestive powers permit us to resort with still further benefit to a system of hyper-alimentation by means of prepared foods, such as Reed and Carnrick's "beef peptonoids," or Favrot's, or Parke, Davis & Co.'s "powdered beef," the first-mentioned preparation being the best that I have come across for the purpose; and, what is a very important matter, the patient is able to ingest this increased food voluntarily, doing away with the necessity for resort to the tube of Debove, a method to which patients manifest repugnance, and in some cases unconquerable disgust, undoubtedly

beneficial though it be. I have tried forced feeding by means of the tube in two or three cases, but have been compelled to abandon it; while by the use of condensed aliments in connection with compressed air I have seen results as astonishing and as permanent as any reported to follow forced feeding. These condensed and predigested foods are to be taken in addition to the ordinary meals of the patient, the latter being properly regulated as to quantity and quality.

If at the same time that we force open the pulmonary alveoli and distend the lungs to their full capacity we impregnate the inspired air with some suitable vapor, we accomplish both systemic and local medication. The agent chosen should not be too irritating, and should be one which, either from empirical or physiological considerations, is known to be of benefit. Pine regions have long enjoyed favorable repute as resorts for consumptives, and the peculiar quality of the atmosphere of these regions can be very closely imitated by the employment of terebinthinate vapors, especially terebene, a derivative of turpentine. From some recent observations of Dr. J. Solis-Cohen, if the inhalation of terebene be followed by that of a moderate quantity of oxygen* the effect seems to be still more accurately reproduced. Possibly ozone would be better. The compressed air, or the oxygen, can ordinarily be employed only once or twice a day. The inhalation of terebene, however, can be continued indefinitely by means of the Yeo respirator, five or ten drops being placed upon the sponge, advantageously mixed with an equal quantity of spirits of chloroform. Terebene is somewhat irritating, but the chloroform modifies this quality. Another method of accomplishing continuous inhalation is to evaporate terebene or turpentine in the living-room of the patient, either from the surface of steaming water contained in a suitable vessel, or by means of some of the more elaborate apparatus which have been devised for this and similar purposes. The advantage of the respirator is that the patient need not be confined to one room. It can also, if the patient be bold enough, be worn in the street. Bold patients are rare.

* The oxygen may, if desired, be passed through a wash-bottle containing a small quantity of terebene, similarly to the compressed air.

Other drugs having the pine-wood effect are tincture of benzoin, oil of pine, oil of fir, and eucalyptol. These may be used in various combinations. Creasote is another drug of very great utility. Iodine and ethyl iodide are also of benefit in some cases, but these latter agents, despite the traces of iodine in maritime atmospheres, belong rather to the list of medicinal than to that of climatoid inhalations, and it is not of the medicinal treatment that I now desire to speak,—it being understood that, whether we send our patient from home in search of a suitable atmosphere or endeavor to bring that atmosphere to him, dietetic, hygienic, and medicinal measures should be instituted *secundum artem.*

THREE CASES OF REMOVAL OF THE OVARIES AND FALLOPIAN TUBES (TAIT'S OPERATION).

Read before the College of Physicians of Philadelphia, November 4, 1885,

BY W. W. KEEN, M.D.,

Professor of Surgery, Woman's Medical College of Pennsylvania, and Senior Surgeon to St. Mary's Hospital, Philadelphia.

THE following cases are put upon record as a contribution to an important operation, the usefulness of which is assured in certain cases, but the limitations of which have not yet been perfectly well defined.

Case I.—Uterine Myoma; Excessive Hemorrhage and Anæmia; Tait's Operation; Recovery and Cure.—Mrs. L., of New Jersey, æt. 42; married at twenty-eight; two children, the last born ten years ago; each eleven pounds; normal labors; no miscarriages; absolutely well and strong till three years ago, when her periods became gradually more prolonged and profuse. Now she is unwell three weeks out of every four, and the flow is often so severe as to saturate a napkin every fifteen minutes, besides large clots of blood. She is thoroughly blanched, weak, and anæmic.

November 25, 1881. Sent to me for consultation by Dr. Hollingshead. A tumor is visible in the hypogastrium the moment she lies down and the abdomen is exposed; sound enters six and one-fourth inches. The tumor is an interstitial myoma in the posterior wall, as large as a large fist, moderately tender and painful; no vegetations on the endometrium; no erosion of os; cervix not involved; uterus movable. Advised Squibb's extract of ergot (℥xxx–xl), hypodermically, daily into the abdominal wall for a month; if not

then better, advised Tait's operation, as all other means had been previously tried by her attending physician. She was unwell at the end of November, when the ergot was first used. It gave rise to great pain and considerable local inflammation, with nausea and vomiting, and had to be discontinued.

December. Again unwell; the intermenstrual period was freer from pain; but she was weaker and more blanched, and not able to come to the city; lost a large quantity of blood.

January 26, 1882. Came to the city; was so blanched that, had she closed her eyes and folded her waxy hands, she could easily have been mistaken for a corpse; weight one hundred pounds. Treatment: iron, quinine, milk-punch; food every two hours.

28th. Taken unwell; period lasted till February 2; used twenty-eight napkins, besides passing a number of large clots. Bad neuralgia of face; morphia (one-eighth grain) hypodermically failed to relieve, but water similarly given lessened it. Eats but little, on account of pain.

February 3. Dr. R. P. Harris saw her with me, and concurred in advising the operation. Temp. 98.5°; pulse 80, feeble; heart normal, but weak; no change in uterus.

9th. Operation, 12 M.; antiseptic method with carbolic acid, including the spray; bladder emptied. Duration of operation forty-five minutes. Ether (f℥viiss) used; incision four inches long, in median line, from pubes half-way to umbilicus; no vessels tied.

On opening the abdomen, a moderate amount of serum escaped. On account of the high position of the uterus, the ovaries were readily found. Each pedicle was transfixed with a double carbolized-silk ligature close to the uterus, the upper including the Fallopian tube, and, after ligature, the tubes and ovaries were removed. The left ovary showed a recent corpus luteum; it had a few small cysts, and was cirrhosed in part. The right had one cyst two inches in diameter, and several smaller ones. The right tube was cystic just at the cervix uteri; it contained a serous fluid. The veins were very large; no bleeding requiring a ligature occurred. The ligatures were all cut off short; four deep and two superficial sutures: the former, including the peritoneum, closed the wound. Dressed with carbolized gauze.

Immediately after the operation her pulse was 120 and feeble. Hot-water bottles were applied, and brandy was used hypodermically several times with good effect. She vomited only once up to 3.30 P.M., when her pulse was 93, temp. 97.2°; very small quantity of food and stimulant every twenty minutes. 7 P.M. Pulse 100, temp. 99.6°; has had some pain; feels stronger. 11 P.M. Temp. 100.8°.

10th. Slept but little, but is comfortable; temp. 100°.

11th. Temp. 98.4°; considerable pain in the back at 9 P.M. last night, followed by a bloody vaginal discharge. In twenty-four hours has used sixteen napkins, moderately saturated. Water at 105°–110° ordered, which gave great relief.

12th. Has used twelve napkins; temp. 98.8°.

13th. Slept excellently; discharge has ceased; dressing changed (fourth day). It was barely soiled with very slight oozing from the operation; no pus; wound free from blush; union by first intention throughout; meat allowed.

15th. Several enemata having had no effect, and as she felt uncomfortable, the rectum was emptied mechanically of a large amount of impacted scybala.

19th. Redressed; wound healed; sutures removed.

22d. Sat up.

25th. The menstrual period was due on the 24th; has used two napkins to date; less than f℥ss blood on each.

March 17. Went home; weight one hundred and ten pounds.

24th. Menstruation due: had some backache; no blood; stayed abed three days.

June 6. Came to see me; brown as a berry; weight one hundred and thirty pounds; appetite good; strength nearly regained; each month had had slight malaise; no bleeding; uterine cavity three and three-quarter inches; myoma not perceptible, except by bimanual examination.

March, 1884. Rapidly regained full strength; weight has continued at one hundred and forty pounds; no bleeding; sexual appetite unimpaired; tumor entirely gone; uterus three inches.

Case II.—Severe Nymphomania, leading to Incipient Insanity; Menorrhagia; Tait's Operation; Recovery; Cure.—Mrs. B., of New Jersey, æt. 42, American; eight children, last born eight years ago; operated on by me successfully four years ago for lacerated perineum, and later another operation for severe hemorrhoids. Wife of a poor, ill-paid clergyman, and hence her life was a constant struggle properly to feed and clothe her large family. I have known her from childhood. She was always a most exemplary Christian woman.

Her head began to trouble her not long after the first operation, and she attributed it to the ether, which, however, she bore perfectly well in both operations. She had strange feelings, as if unconscious and in a fright or dread of ether, especially at night. Exposed to the sun in August, 1881, she had an attack of heat-exhaustion, followed by a second attack a week later. After this, her menstruation, always previously easy and regular, ceased for three months. During this time she was treated for malaria and her head became worse, which she attributed to the quinine. She became very nervous and

sleepless; lost all self-control; could not bear any noise of the children, the church-bell, or even her own voice. She became unable to do any work, and had extreme depression of spirits; attempts at suicide were repeatedly contemplated, but, though almost determined to end her life, she was deterred by her religious fears. These emotions were readily confessed to me and to her husband. In December, 1882, her menstruation became very profuse, and was continuous for three months. Since then it is not continuous, but is still very profuse.

Meantime, in October, 1881, by spells her sexual appetite, till then a matter of little moment, became immoderate. Day and night it was an exquisite physical and mental torment, and even led her to repeated self-abuse when it could not be gratified. This nymphomania and her head-symptoms were always worst at her menstrual period. Finally, she went voluntarily to an insane hospital in March, 1882, being utterly unfitted for her household duties and in constant dread of suicide, but soon returned home.

January 2, 1883. I saw her; head still as described, and she was almost desperate; uterus normal, except some erosion at os, and freely movable; clitoris and other generative organs normal. Her attacks of nymphomania were still frequent and severe, especially during menstruation. She was fast passing towards permanent insanity. She loathed herself for her abnormal sexual appetite; she had struggled against it, as well as against her suicidal intent, till she was ready to hail anything that gave the faintest hope of relief at any risk to life, for which she cared absolutely nothing. She had been under varied and excellent care, and every moral means and all promising drugs had been freely tried. I therefore proposed Tait's operation, to which she and her husband instantly assented.

4th. Operation; ether; antiseptic method (carbolic acid), with spray; bladder emptied; incision three inches in median line upward from pubes; layer of fat (she was well nourished) one inch thick, belly-wall two inches. Left ovary found without difficulty; its pedicle pierced by needle with eye in the point carrying a double carbolized silk ligature; ovary and Fallopian tube tied separately and ligatures cut short. One ovarian vein was varicose and as large as the little finger; ovary and tube both removed. Two pedunculated growths of the size of peas were attached to the ovary, one directly and another from the middle of a long foot-stalk attached at the two ends to the ovary and to the tissue between the ovary and tube. The right ovary was found with some little difficulty; as it was pulled out of the wound a small cyst burst. It was treated precisely as the left, and tube and ovaries removed. Both tubes and ovaries were intensely congested (her last menstruation was five days past); several small cysts existed in each.

Her recovery was uninterrupted. She had a little bilious vomiting, and retention of urine requiring the catheter, but no pain; and no medicine.

8th. A moderate vaginal hemorrhage began, which ceased four days later spontaneously.

9th, 11th, and 14th. The stitches were removed. Her highest temperature was 99.4°.

19th. Down-stairs.

23d. Went home. Since then I have seen her repeatedly, the last time in the spring of 1885. Her mental symptoms and head-troubles have gradually become better. For the first six months or more she was often despondent, but she gradually recovered her cheerfulness to a large extent, resumed her household occupations, and is perfectly well. The nymphomania ceased from the time of operation, save two very slight and short attacks. Coitus is rare, but is entirely normal, and is not followed by any tendency to her former deplorable condition.

Case III.—Uterine Myoma; Severe and Long-Continued Hemorrhage; Operation; Death.—Miss W., æt. 40, first menstruated at fourteen, always profusely. For the last seven or eight years much worse, the flow continuing ten to fourteen days. In May, 1884, she began to suffer from continuous hemorrhage, which has persisted till the present date, January 2, 1885. Occasional severe hemorrhages also occurred. She is very pale and anæmic, with waxy lips, and has lost much flesh and strength, especially of late. To-day I examined her under ether: uterus three inches in length, and movable; a myoma as large as the fist was discovered in the anterior wall and fundus. Hypodermic injections of Squibb's ergot, in f℥j doses every second day, were used, to which, later, was added f℥j of the fluid extract of ergot daily, with tonics and good diet.

January 29. Has passed the menstrual period without noticeable hemorrhage, and to-day, for the first time since last May (excepting two days), has dispensed with a napkin. From this date till April her menstruation ceased. In April and May she had a normal discharge. But in June the hemorrhage returned, and continued so profusely as to threaten life.

July 4, 1885. The hemorrhage having been checked for three days by the above means, I operated. The tumor, which had clearly increased in size, was immediately seen on uncovering the belly. Ether; antiseptic precautions, including the spray (carbolic acid); bladder emptied. The enlarged uterus was so much in the way that the ovaries could not be seized through the small incision first made in the linea alba, the ovaries not having been carried up with it, and it had to be

prolonged one inch above the umbilicus. The whole hand had to be introduced, the uterus lifted and pushed forcibly aside, and the ovaries were even then reached with the greatest difficulty and after several attempts. The ovary and tube on each side were removed, the pedicle being tied with stout carbolized silk, which was cut off short.

The left tube was attached to the ovary at the fimbriated extremity; two cysts, one filled with blood and one with serous fluid, existed in this ovary, the stroma of which was largely cirrhosed. One large (size of an English walnut) and one smaller serous cyst were found in the right ovary, and its stroma was atrophied and cirrhosed. All four cysts were ruptured during removal. About eight ounces of serum were found in the peritoneum.

5th. The wound was united with silver-wire sutures after careful cleansing of the peritoneal cavity (there was no bleeding), and then dressed with carbolized gauze. Symptoms of peritonitis began to develop, and in spite of all remedies progressed to a fatal issue on July 7. The temperature was 102° to 103° till shortly before death, when it rose to 106°.

Autopsy.—July 8. Recent lymph was found over a considerable portion of the belly-contents, with an ounce of pus in Douglas's cul-de-sac. No hemorrhage had occurred.

NOTES ON RECENT PROGRESS IN PHYSIOLOGY AND PATHOLOGY IN PARIS.

VULPIAN'S RECENT RESEARCHES ON THE PHYSIOLOGY OF THE BRAIN.

PROFESSOR VULPIAN, the well-known physiologist, has, in a series of communications to the Académie des Sciences, described a long course of experiments, and their results, which throw a little new light on that obscure question, the physiology of the brain. Pflüger's theory is generally admitted by physiologists. MM. Rosenthal and Marey are among the rare exceptions who believe that it is based on results which have not been clearly demonstrated. This theory admits that electric stimulus communicated to a nerve becomes more and more intense in proportion as it travels along the nerve from the stimulated area towards the periphery, therefore of necessity an electrical stimulus of unvarying intensity produces muscular contraction more and more exaggerated according to the increased distance of the stimulated area from the muscles. Another logical deduction from Pflüger's theory is, that a current which is too weak to provoke muscular contraction near the peripheral extremities would have this effect if the current communicated the nerve-stimulus to a point farther removed from the nerve-terminations.

M. Vulpian made the following experiment, which negatives Pflüger's theory. A dog was submitted to the effects of chloral until the reflex phenomena which have their origin in the medullary substance were entirely suppressed. The external popliteal nerve was then isolated at the upper part of the thigh, and a glass rod was passed under it without cutting it. The tibialis anticus was isolated in the same manner, and it was stimulated by a current from Du Bois-Reymond's apparatus. When the two coils were separated by a distance of five hundred and ten millimetres, the foot contracted. The external popliteal was stimulated by this same current, but no movement was provoked. The coils were then placed closer together by fifteen millimetres, at a distance of four hundred and ninety-five millimetres, and contraction took place. Other experiments made by M. Vulpian were equally adverse to the accuracy of Pflüger's theory.

Having obtained these data concerning the peripheral nerves, M. Vulpian extended his researches in order to ascertain if the same phenomena were repeated in the brain, and if the gray substance presented certain areas, some more easily stimulated than others, as is supposed by some physiologists who have studied the effect of electrical stimulus on the cerebral surface. When in a dog's brain those cortical regions which are admitted to be the motor centres for the facial muscles, for the fore and hind legs, are successively subjected to the influence of an electrical stimulus, it is observed that the first region enumerated is influenced by a weaker current than the second, and the second by a weaker than the third. The distances between the coils of a Chariat apparatus were respectively one hundred and eighty-five millimetres, one hundred and seventy-eight, and one hundred and seventy-five. As the experiment first described demonstrates that the strength of the current must be proportionally greater the farther the region stimulated is removed from the periphery, it is not logical to suppose that one cerebral region is more easily stimulated than another, but that it is a question of distance, and a certain proportion of stimulus is spent on the road (by resistance). This

second experiment is additional evidence that Pflüger's theory is fallacious. Its results, likewise, have a direct bearing on cerebral pathology which deserves serious attention. A stimulus communicated to regions of the gray cortical substance may be powerful enough to stimulate the nucleus of origin of the facial nerves and provoke facial movements, but not powerful enough, though actually in existence, to stimulate the nuclei of origin of the nerves of the limbs.

M. Vulpian, farther on in his researches, succeeded in establishing a fact that negatives many others hitherto admitted with regard to cerebral localization. Many experimentalists believe that certain motor and sensory centres are localized in certain given cerebral areas. Some clinical phenomena seem to support this doctrine, others to disagree with it. M. Vulpian's experiments indicate that the gray cortical substance is not excitable by the current in the areas known as special centres, but in the underlying white substance. He isolated electrical conductors by means of gutta-percha and then passed them along the gray substance, and was thus able to observe that an electrical current which was not strong enough to stimulate the gray substance provoked movement. He also ascertained that if the gray substance was congealed by means of methyl chloride, an electric stimulus provoked movements in those limbs of which the motor centres had been localized in the gray substance which had been destroyed by congelation. These two experiments indicate that the centres which had been localized in certain regions of the gray substance have no real existence. The real origin of the nerve-fibres is in the underlying white substance, and therefore the gray substance does not present isolated groups of cells affected to different functions. This peculiarity of structure, moreover, is entirely contrary to what is known of the intimate structure of the gray substance.

M. Vulpian has ascertained by means of his experiments that the brain is capable of receiving a stimulus only during a few seconds after death. Once only he observed in a dog's brain the stimulation-period extend to nearly one minute and a half after the cardiac movements were suddenly arrested by electrization. M. Vulpian affirms that in those cases where experimentalists have believed that stimulation of the cerebral motor regions has lasted longer, they have mistaken for cerebral stimulation contractions resulting from direct electrization (by direct or diffused currents) of the nerves and muscles near the brain. The contractions produced by faradization of the cerebral lobes a few minutes after death never take place in the limbs, but are always limited to the muscles of the face (especially the temporal muscle) and the muscles of the neck (the trapezius muscle included). M. Vulpian's assertions are in reference to experiments made after part of the cranium has been removed. The results of those made under other conditions cannot be considered valid. If the faradic current is not very intense, these contractions are always limited to the side faradized. If the left cerebral lobe be electrically stimulated, the contractions appear on the left half of the face and neck. If the current be sufficiently strong to provoke contractions on both the left and the right side, they are always more marked on the side which has been submitted to faradization. Direct stimulation of nerves and muscles by means of direct or diffused currents is followed by phenomena exactly similar to those obtained by the following experiments, in which stimulation does not enter into the question.

A few minutes after crural pulsation was arrested in a dog by faradization of the cardiac ventricles, the brain was quickly removed by cutting the spinal cord behind the medulla oblongata and cutting also the cranial nerves. After a few minutes had elapsed, the brain was carefully replaced in exactly its normal position. The electrodes of an apparatus of induction-currents were placed on the cerebral lobes. The points of these electrodes were at a distance of .005 of a millimetre from each other. A strong current was then passed, and the temporal muscles and the muscles of the side of the neck corresponding to the cerebral lobe electrified were electrified. When the posterior third of the cerebral lobe was faradized, the muscles of the neck especially contracted, but still more powerfully when the surface of the cerebellum was stimulated. These phenomena occurred about half an hour after cardiac contraction was arrested. When the electrodes penetrated the lobes, the contractions were more violent than when applied to the surface. Contractions also occurred when,

after the brain was removed, a moist sponge was placed on the medulla oblongata. When a faradic current was passed through the sponge, contractions of the temporal muscle or of the muscles of the neck took place on the side electrified, according to the areas which received stimulation. M. Vulpian has, by electrifying the surface of the wet sponge by a strong current, provoked contractions in the temporal muscle of the corresponding side forty-five and fifty minutes after circulation had ceased. It generally happens that these phenomena that are clearly observed twenty-five minutes after circulation has been arrested are not repeated thirty-five minutes afterwards.

These experiments have been made on dogs; but M. Vulpian does not believe that the period of cerebral stimulation after death in adult dogs differs greatly from that of other adult mammals, unless they are hibernating mammals and in a state of hibernation.

The cause of death influences but slightly the length of this period. In cases where death results from sudden arrest of the circulation, the stimulation-period after death is of the longest duration.

(To be continued.)

TRANSLATIONS.

Total Extirpation of the Carcinomatous Uterus.—Schultze, of Jena, contributes to the *Deutsche Medizinal Zeitung* (Nos. 1–4) a paper containing the report of twelve cases of extirpation of the uterus for cancer, three by abdominal section, all fatal, and nine by vagina, of which seven recovered. He insists upon the importance of early diagnosis, and reviews the history of the operation to prove that the earlier that patients suffering with carcinoma come under operative treatment the greater will be the proportion who, after several years have passed, will remain in good health. General practitioners are particularly enjoined in all cases of irregular hemorrhages from the genitalia of women, whether married or single, especially from the thirty-sixth year on, to make an exact local diagnosis of the cause of the bleeding, so that even an ulcerated carcinoma of the uterus shall be early recognized. The great majority of uterine cancers are still amenable to treatment when the ulceration has not progressed far. The possibility of the existence of cancer of the uterus makes even a leucorrhœa, at this time of life, occasionally of great significance.

With regard to the relative frequency of cases of uterine cancer, Schultze points out an error which has crept into a number of text-books. Glatter's statistics, based upon the 37,106 deaths occurring in Vienna of women over twenty years of age, showed that 937 died with uterine cancer (25 per thousand). The greatest proportion was noticed in the deaths occurring from 46 to 50 inclusive, 2763, of which 183 were of uterine cancer, or 66.2 per thousand. Gusserow (in Billroth's Handbuch der Frauenkrankheiten), in taking the cases by decades (instead of quinquennially) unconsciously doubled the death-rate. Schröder (Handbuch der Krankheiten der weiblichen Geschlechtsorgane) made a greater mistake in taking the figures of Glatter to represent the actual mortality from uterine cancer, whereas the original only referred to the proportionate mortality from this cause in the number of deaths from all causes. This error led Schröder to state that 6.62 per cent. of women at the age of 46 to 50 years die of uterine cancer, which is about eighteen times too great. The actual mortality at this age, according to the statistics above referred to, compared with the experience of life-insurance companies, shows that the proportionate mortality at this age among women is only about thirty-six per ten thousand.

Comparing the results of the abdominal and vaginal operations, Dr. Schultze says that, according to Hegar (1881), the mortality of Freund's operation was 71 per cent. (and it may be still greater, since operators do not always promptly report their fatal cases), and that of the vaginal total extirpation only 25 per cent. Sänger (1883) placed the mortality of 133 vaginal operations at 28.6 per cent., whereas Schmidt, continuing the statistics in 1885, collected 242 vaginal total extirpations, with only 64 deaths (26.3 per cent.).

Cases will occur in which total extirpation is indicated, but, on account of the size of the uterus, it can only be removed per abdomen. In such cases the peritoneal part of the operation should be performed as quickly as possible. The preliminary operation of cutting around the carcinoma per vaginam (as recommended by Rydygier)

not only increases the safety of the patient at the time, but also enables the operator to be sure that nothing of the carcinoma which can be removed remains in the vagina. If it be possible thus to free the cervix uteri from the vagina, the peritoneal section can be accelerated, and the danger of the Freund operation materially lessened.

In all cases a careful diagnosis as to the extent of the carcinoma should be made, under an anæsthetic. This is done by placing the index and middle fingers in the rectum, the thumb in the vagina, while the other hand is placed on the abdomen. If this examination show that the carcinoma of the vaginal portion reaches to the height of the cul-de-sac of Douglas, then, obviously, nothing remains but the radical operation of total extirpation.

In cases of isolated carcinoma of the corpus uteri, the amputation of the fundus of the uterus per abdomen, theoretically, would be the proper operation; yet statistics show the danger of this operation to be much greater than that of total extirpation. In cases of carcinoma of the fundus, therefore, when the uterus is small enough to be removed through the vagina, this operation should be preferred to removal by laparotomy; for the amputation of the fundus per abdomen shares with Freund's operation the danger of injury to the intestines, and also that of peritoneal infection by the cancer-juice from the section. This is avoided in the vaginal method of total extirpation. Any danger of infection of the peritoneum through the healthy cervix can also be excluded by efficient tamponade of the cervical canal. The supravaginal amputation of the carcinomatous corpus uteri by means of laparotomy would therefore be reserved for those cases only in which the uterus is too large to be removed through the vagina.

Dr. Schultze states that a vaginal amputation of the fundus has never been accomplished to his knowledge, but he considers it a possible operation in selected cases. The injury of the operation is still less if the anterior wall of the vagina is left intact and the cervix can be left in connection with the bladder. Should unexpected difficulties arise preventing the carrying out of the operation, it can be completed as one of total extirpation.

An operation for the removal of the carcinomatous uterus is based upon the possibility of the removal of the entire carcinoma, but the extent of the disease is not always easy to determine, and can only be decided by experiment. Most operators have uncompleted operations in their experience. The value of statistics depends upon a report of all cases, whether favorable or unfavorable.

Treatment of Lupus by Applications of Ice.—The slow course of lupus, as compared with that of tuberculosis of the interior organs, certainly bears some relation to the scanty appearance of bacilli existing in lupus new-formations, which in turn is dependent upon the colder temperature of the external skin, as it is well known that at a temperature of 30° C. the bacilli develop very sparingly, and at 28° C. no further development occurs.

Professor Gerhardt, of Berlin (*Berliner Klin. Wochenschr.*, No. 41, 1885), in view of this fact, attempted through refrigeration to check the growth of the bacilli, and consequently the further formation of lupus-tissue. He suspended an ice-bag from a frame directly over the patient so as to cover the whole or greater part of the surface of the lupus without pressure upon it, when the patient was lying upon his back. The average length of the ice-application was three hours twice daily.

In three cases of lupus of the nose, although the treatment could be applied for only a comparatively short time (two to four weeks), the result was very evident. The diseased areas became covered with a new skin, infiltration disappeared, and the skin was soft and smooth, though still a few nodules were present. In a fourth case of lupus, involving the whole left cheek, the region of the lower jaw, the ala of the nose, and the eyelid, after two months' treatment only one small tumor or nodule was left in the region of the lower jaw. In the other parts the skin was smooth, pale, and thin.

Whether the cure is permanent or not remains to be determined, as, according to the investigations of Schill and Fischer, the bacilli may retain their vitality for weeks in putrefying sputa; yet it is to be supposed that when exposed to such unfavorable vital conditions they are put at great disadvantage in the struggle with the vital processes going on in the cells surrounding them.—*Deutsche Medizinal Zeitung*, No. 2, 1886.

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EDITORIAL.

ÆSCULAPIA VICTRIX.

IN the January number of the *Fortnightly Review*, Mr. Robert Morris writes entertainingly, under the above heading, of the origin and progress of medical education for women in Great Britain. His facts are almost altogether derived from English experience, although the status of female medical practitioners in this country is once or twice referred to.

The London Medical School for Women was started in 1874, largely through the energy and ability of Dr. F. E. Anstie, who was elected first dean, but who unhappily died from septicæmia contracted while making an autopsy before the school was opened. Among the lecturers have been the following: Messrs. Reeves, Rivington, Heaton, Berkeley Hill, and Critchett, Professor Shaefer, and Drs. Donkin, Sturges, Thomas King Chambers, Bastian, Cheadle, and Sankey. Probably no single school in London has a more brilliant teaching staff. Most of the above are also attached to other schools in the metropolis. Active work was begun on a capital of little more than five thousand dollars.

It was three years after the organization of the school before medical women could qualify before any of the licensing bodies, and it was not until 1878 that the authorities of London University voted to admit women to all the degrees. The vote by which this conclusion was reached is interesting, and apparently shows that doctors are more conservative than other classes of men of liberal education. The vote is as follows: in favor of granting the degrees were twenty-two graduates in medicine, thirty-three in science, twenty-eight in law, and one hundred and forty-eight in arts; the votes in opposition to granting examinations and degrees to women were cast by eighty-three graduates in medicine, four in science, nine in law, and thirty-six in arts.

Since the school was opened in 1874, one hundred and fifty students have been admitted, about one-third of whom have qualified for practice in Great Britain.

Regarding the chances of medical women for professional success, the writer in the *Fortnightly* takes, on the whole, a favorable view. In fact, he thinks "that a woman has rather a better chance than a man in starting as a doctor, for if she settle in a good provincial town she usually has no competitor of her own sex to fear, and, without buying a practice, she is pretty sure, even though she put forth no very extraordinary efforts, to earn about one thousand dollars a year after being in practice for two years."

In the United States the chances of success for the average female practitioner are probably a little more favorable.

The removal of certain conservative restrictions in a number of local, State, and national societies, which formerly prohibited female membership in such societies, is an evidence that in this country also the claims of medical women are becoming recognized by the profession. The recent appointments of female *internes* in some of the Paris hospitals, and of a woman as medical inspector of schools in that city, show that the daughters of Æsculapius have likewise obtained professional standing in France.

With a fair field and perhaps a little favor from the sterner sex, the path of the female practitioner should henceforth be, if not exactly and exclusively a path of roses, at least one in which the thorns are not too numerous and salient. It is evident that women have entered the profession to stay.

THE REDUCTION OF EXCESSIVE BODILY WEIGHT.

IN the method of Oertel, obesity is to be overcome by decided reduction in the fluid elements of the food, conjoined with systematized muscular exercise. From the accounts published regarding the "Terrain Kur," it is seen that not only is the total weight of the food reduced to about one-half, but the water is reduced to even a lower proportion. The constituents of the diet are also materially altered by reducing the carbohydrates and increasing the nitrogenous principles. For instance: a healthy man takes, on the average, about 130 grammes of albumen, 84 of fat, and 404 of carbohydrates; Oertel gives his patients 169 of albumen, 43 of fat, and 114 of carbohydrates. This system of treatment thus briefly indicated bears the endorsement of personal experience, Dr. Oertel having applied the teachings of Pettenkofer and Voit to the improvement of his personal health, comfort, and appearance. Although his method has been received with evident marks of favor by the medical press generally, we are glad to observe that the *London Medical Record* sounds a note of warning, on the ground that it does not seem to be based upon sound physiological principles. Even though conducted, as its author urges, under strict medical supervision, it is possible that serious strain may be put upon the organs of circulation and the kidneys, which under such circumstances are always in a more or less pathological state. The diminution of the fluids of the diet acts upon very nearly the same principle as the administration of concentrated saline solutions in cases of pleuritic effusion, as lately recommended by Dr. Hay, of Aberdeen,—the result aimed at in each case being to reduce the total volume of blood, and thus to stimulate the absorbent vessels to greater activity.

An essential part of the treatment of Oertel consists in requiring the patient to take a course of exercise in walking, first on a level ground, and then on gradually increasing gradients. This involves the selection of a site for the carrying on of the cure in a mountain region, and several establishments under medical care have been opened at Meran, Bozen, Arco, Baden-Baden, Abbagia, and elsewhere. Here the details as to diet and pedestrianism are carefully regulated by the medical attendant, and the reports which have been received of the results of the treatment have been highly favorable.

Perhaps the pure mountain air inhaled during the daily walks may have exerted no inconsiderable influence in improving the bodily vigor, but the restriction in eating and the limitation of alcoholic stimulants to the minimum, with the muscular work daily, are measures admirably calculated to reduce excessive corpulence, provided that due regard be had to the state of the kidneys and circulation. These recommendations might almost be summarized in the classical advice of Abernethy, "to live on sixpence a day and earn it," which many might learn to do with advantage.

While overfeeding finds its natural corrective in semi-starvation, and the results of indolent and luxurious habits may be overcome by temperance and physical exercise, it is evident that great care is required in making special and severe and sudden applications of this principle in a class of subjects whose powers of vital resistance are low, and who are often regarded as *opprobria* of both medicine and surgery.

PARVIN ON THE REMOVAL OF THE UTERINE APPENDAGES.

IN the course of the discussion upon the paper of Dr. Parish which appeared in our last issue, when it was read before the County Medical Society, Dr. Parvin admirably summed up the principal features of the subject in the following words:

"The great point in the whole matter is the necessity for sterilizing women. If it be right, as it certainly is, in given conditions to destroy

the very purpose of woman's sexual character and to render reproduction impossible, the question arises, What are those conditions? The gravity of the physical change in woman's nature cannot be too strongly presented. Notwithstanding all that has been said in regard to a woman's retaining sexual desire after the removal of her ovaries, she is no longer a woman so far as the essential design of her physical nature is concerned: her reproductive power is gone. There may be sexual enjoyment, but she has become one of Lord Bacon's barren virgins. She now is one with whom sexual intercourse occurs for pleasure, not with the hope of posterity. In this respect she is no longer a wife, but becomes a prostitute,—one for whom sexual intercourse is an end, not a means. So far as sex is concerned, she has become a neuter.

"Several indications for the operation have been presented, but I will refer to only one or two. The first of these is the presence of uterine myomata causing dangerous hemorrhage. When these tumors cause hemorrhage they are usually submucous. But a submucous tumor is in the process, usually, of becoming pedunculated, and it is possible that in some of the cases where removal of the uterine appendages has been done, a little patient waiting, with temporary means for moderating the hemorrhages, and one might have found the tumor pedunculated, when its removal through the vagina could have been effected.

"Again, we have to consider the mortality of the removal of the appendages for myomata. I doubt the propriety of taking Mr. Tait's statistics as our guide. The question is, How many will die when the operation is done by moderately skilled hands, or the average skill of those doing such operations? At the Copenhagen International Congress, Wiedow reported one hundred and forty-nine cases, with a mortality of ten per cent. Tissier more recently has collected one hundred and seventy-one cases, with a mortality of 14.16 per cent. In the latter's cases there were eleven in which the result sought by the operation was not attained. A most interesting case has recently been reported by Mr. Tait in the *British Medical Journal*, where removal of one ovary and a part of the tube failed to arrest the growth of the uterine tumor, as well as to stop the hemorrhages. Only the tube and ovary of one side were removed, he failing to find the other. Hysterectomy was done, and there was found to be congenital absence of the tube and ovary on one side. He explains the continuance of the hemorrhage and of the growth of the tumor by the fact that only a part of the tube was removed in his first operation.

"And here arises the question as to the organs it is essential to remove, a question that is answered differently by different authorities. Mr. Tait holds that the tubes are the essential organs, and in some cases has removed them alone, leaving the ovaries. On the other hand, Sir Spencer Wells would not remove the tubes unless they were diseased.

"I know of no statistics showing the mortality in moderate-sized uterine myomata; and it is in such cases removal of the uterine appendages has given the best results, for when the tumor is very large of course the mortality is greater, and the result finally not so certain. A comparison of such statistics, could they be had, with those of removal of the uterine appendages in regard of mortality, would be most valuable.

"A word as to diseased oviducts demanding removal. It is certainly remarkable that Mr. Tait has met with so many such cases, while Emmet has seen but two, and both of these got well without an operation. Dr. Emmet has told me that the greater prevalence of such serious disease of the tubes in Mr. Tait's practice is to be attributed to the greater frequency of gonorrhœa in the women there than in our country.

"I believe there is much to be learned as to the limitations of the operation, and it will probably be years before firm ground is furnished upon which all the profession can rest. Dr. Parish's contribution helps to the attainment of this end. I think most if not all of his conclusions can be accepted."

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

WHILE medical journals grow and multiply and prosper with you, a very different state of affairs obtains here. An attempt some ten years ago to float a new metropolitan medical journal ended in failure, and now a well-known if secondarily important member of the little group of

journals devoted to medicine is disappearing from vision in London. Forty years ago the *Medical Times and Gazette* was a vigorous periodical, remarkable for its scientific articles and its *esprit.* It possessed originality, and gave some long series of articles which afterwards appeared in book-form as "The Races of Man," by Knox, famous or infamous from his association with the Burke and Hare murders for anatomical purposes in Edinburgh. D'Arpentiny on "The Hand" appeared in a series about the same time. In the spring of 1862 a most valuable series of papers on "Physiognomical Diagnosis," from the pen of the late Professor Laycock, Professor of Practice of Physic in the University of Edinburgh, came out in the then flourishing *Medical Times and Gazette.* Marion Sims was severely handled by it for the conduction of his observations on sterility. It possessed a high tone, and was a keen stickler for medical ethics and proprieties. For long Sir Spencer Wells was its editor, a position he held when rescuing ovariotomy from the list of unjustifiable operations. Then Jonathan Hutchinson was one of its staff, and many a thoughtful, masterly article was the product of his pen. The late Dr. Silver was for years its guiding spirit. But somehow it lost its prominent position. The well-known medical publisher, Churchill, was its proprietor; and in it and the defunct *Medico-Chirurgical Review* he filled a conspicuous position in medical literature. But some years ago the *Medico-Chi.*, as it was termed, dwindled out of existence, and now the *Medical Times and Gazette* has followed its example. A certain spirit of Philistinism crept into both as death approached, and neither can be said to have died lamented—unless it is by those who took its pay. Under the cover of anonymity some ruthless and savage attacks were made on rising men by the *Medico-Chi.*, who did not either forget or forgive their assailant when they rose to be formidable. We may say "Peace to their ashes" in both instances.

For some months past it has been my intention to give some account of the discussion on glycosuria which came off at the annual meeting of the British Medical Association at Cardiff in July last. But so far I have waited in vain for an account of it in the Association's Journal, and inquiry elicited the fact that some of the speakers experienced a difficulty in putting into writing what they had said, or thought they had said, or wished they had said: anyhow, they had not made up their minds what to put on record. At last Dr. Pavy's introductory address has appeared in the *Lancet*, and it becomes possible to give some—if but a fragmentary—idea of what was said. Of course the medical world looks with the greatest interest to what Dr. Pavy had to say, he having been for long the leading authority on the subject of diabetes. As "the clinical aspect" alone came under consideration, the pathology of the disease and its relation to a high blood-pressure in the hepatic artery were not touched upon. He included classical diabetes mellitus, as well as those cases where sugar appears in the urine without any subjective phenomena, under the wide term "glycosuria."

The first matter he discussed was the age at which it may appear, his opinions being based on thirteen hundred and sixty cases from his private note-books. It seems no less than eight cases appeared in children under ten years of age. Another case, not included in his tables, occurred in an infant one year and three weeks old. "The infant had been rapidly wasting, had shown great greediness after fluids, and was passing an excessive quantity of urine, which saturated the articles worn and rendered them stiff on drying." The infant died exhausted a month later. Then he said, "As regards the family history, there are some interesting points to be noted. There can be no doubt the disease runs in families." He then gave a series of cases corroborative of this statement. Three sisters, over fifty years of age, consulted him,—one in 1873, one a year later, and an older sister (fifty-seven) in 1879. All three are still alive. Both their parents had consulted him for glycosuria some years previously. Of another family, two brothers and a sister were diabetic. In another instance, two members of the family died young with it, and another member, aged thirty-two, was suffering therefrom. This last "still continues in good health." So, after all, diabetes is not so deadly as it is usually supposed to be by those comparatively unfamiliar with it. In another family the grandmother and mother died of diabetes, and four out of five girls had their urine laden with sugar. One diabetic had three sons by various mothers, all of whom died with diabetes. He then went on to say, "I think there is every reason to believe that it is distinctly more common among members of the Jewish race than among others,"—a fact which goes to corroborate the view of the relations of glycosuria to mental exercise.

As to its mode of onset, he divided those cases where it came on gradually and insidiously from those where it occurred quite suddenly. In many cases, no doubt, a glycosuric condition had existed for a considerable period of time before its presence was detected. This he held proved by the fact that trousers which had long lain by were found to have splashes of urine leaving a white, sugary stain behind,—a stain not easily removed by brushing. It is in elderly persons especially that these stains occur. On the contrary, the attack in some cases was sudden and abrupt. In such cases some shock to the nervous system usually stood as an exciting cause.

"Then as to duration. This varies within very wide limits. It may go on for years without seriously impairing the patient's general

health, or it may terminate very speedily in death." In one case the disease ran its course in four days. In another the diabetes ended in a carbuncle over the parotid gland, running a course of a few weeks. Those cases where the condition goes on for years ("the patient meanwhile enjoying a fair state of health") are most common in elderly persons, though not confined to them. In one case glycosuria had existed in a lady for over twenty years without any impairment of her health. Such a case, he said, was not very unusual. Even in young people the case is not necessarily of short duration. A young lady whose mother died diabetic commenced to pass sugar in 1877. At the present time she voids a considerable quantity of sugar, though "there is nothing in her appearance which would lead one to suppose that she had anything the matter with her." She had married and borne children. He continued: "Although diabetes, when once developed, generally persists, cases occur where it has disappeared. I have from time to time met with these cases in my practice. I do not allude to mere control of the disease under dietetic management, but a complete eradication." One such case he related where in 1881 the patient was undoubtedly diabetic and in 1884 had no trace of it remaining. Sometimes glycosuria is but "a passing condition." He stated that diabetes insipidus and diabetes mellitus may occur in the same individual, and one may disappear, leaving the other behind. Or the one may precede the other, both disappearing ultimately.

He declined to discuss the causation of diabetes, as that involved its pathology. In some cases hydrosis of one-half of the body was found with glycosuria. A hypertrophic state of the liver was found as a concomitant of diabetes in a number of instances. Then he had seen it along with "abnormal conditions of the nervous system." Especially did he think it was found with locomotor ataxia. Sometimes one precedes the other; sometimes they appear simultaneously. There may be disorder of sensation. Then he also thought it linked with exophthalmic goitre. He then expressed his disbelief in "acetonæmia;" and as to the "coma," he had described it long before Küssmaul. Coma, he held, was apt to be induced by any fatigue. It is preceded by a curious breathlessness, which is followed by drowsiness. He did not think it caused by fatty emboli. Albumen may appear in the urine and go on for years. When present in small amount he attached no significance to it. "Other cases, however, exist which pass on to well-marked Bright's disease; and it is to be noticed that generally, as this condition becomes established, the diabetes has a tendency to subside."

Such, then, were the conclusions Dr. Pavy had drawn from his own experience.

The views expressed by the writer were corroborative of the wide range of maladies embraced by the comprehensive term glycosuria. There were, of course, the cases of classical diabetes mellitus, kept at bay for a time by a rigid dietary, but going on, as a rule, from bad to worse. Also those of sudden origin arising in some mental perturbation, usually of an acute character. From the causal relations of acute diabetes we could reason upon the relations of the more chronic form to long, severe mental toil, strain, or worry. It would appear that in many cases there is mere glycosuria, which deepens and deepens until distinct diabetes, including the uncomfortable subjective phenomena, is developed. If in these cases the mental factor can be put in abeyance, the physical condition can be brought to a stand-still. When, however, this mental factor is disregarded, the case progresses steadily in a downward direction. The liver is perturbed in many of its functions by mental operations, and as to its glycogenic function it suffers as certainly as it does in the metabolism of albuminoids, about which there is not much difference of opinion. This cessation from mental toil is being recognized as a very important matter in the treatment of glycosuria, both preventive and palliative. Then there are persons who find themselves diabetic, who under a suitable regimen remain simply glycosuric, but who are subject to "diabetic storms" on any worry or trouble further upsetting them. Then there is acute diabetes which gradually subsides, to be wakened into life again on any like exciting cause in the future. One old lady known to me has one of these "diabetic storms" set up by an ordinary cold. She goes to bed, rapidly emaciates, with thirst and saccharine urine, but after several weeks loses her symptoms and regains her wonted and ordinary health. Gouty persons, and especially corpulent gouty persons, are very subject to glycosuria, sometimes giving rise to diabetic symptoms. When sugar appears steadily in the urine of an old gouty subject, who at the same time begins to lose flesh, the prognosis is very gloomy. At other times and under other circumstances a saccharine condition of the urine takes the place of gouty symptoms, sooner or later the glycosuria disappearing with a return of the wonted gouty symptoms. The great difficulty in cases of glycosuria is not so much to discover evidences of the presence of sugar in the urine as to interpret correctly its significance when found. As long as there is no wasting there is little ground for anxiety, it not yet having been proved that the kidneys suffer from the passage of sugar through them. But when wasting is developed, then the system is certainly suffering from the waste of its grape-sugar. So long as there is no emaciation, the condition of glycosuria is comparatively unimportant. Indeed, many corpulent persons of middle age pass sugar continuously for years,

—sometimes more, sometimes less. Here it would seem almost a sort of "waste-pipe" affair,—a drain of the surplus grape-sugar not required by the system, and without which the corpulent person would become obese and unwieldy.

The extent to which the diet must be regulated in each case depends upon the individual circumstances and requirements. One person may find it necessary to abstain from ordinary bread, while another requires merely to avoid sweets. No one with any experience of diabetic thirst, with its unquenchable persistency, would willingly increase it or add to it. But in the absence of it (and other diabetic symptoms) it is very questionable how far harm rather than good is the outcome of a strict anti-diabetic regimen. Indeed, many glycosuric persons are of opinion that they have endured more from the regimen than from the malady for whose relief it has been adopted. Each case must rest, as to diagnosis, prognosis, and treatment, upon its own merits,—one thing being certain, that all cases of glycosuria are *not* diabetes mellitus.

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What were the views of the other medical men who took part in this discussion must be recorded by some other pen. A decade has elapsed since Dr. H. C. Wood, then its editor, prevailed upon the writer to become the London correspondent of the *Philadelphia Medical Times*. Part of his instructions were to describe that inner life of the medical world in Great Britain which is a *terra incognita* to the roving correspondent; and this he has done from time to time, and not without incurring a certain amount of ill will and animosity in certain quarters. On the other hand, the manner in which his letters and their contents have been received in the Western Hemisphere was very gratifying to him. A man must be a colorless human chameleon who cannot rouse a feeling of hostility in some breasts; and such is not the writer's aim or ambition. He believes sundry desirable matters at home have owed some portion of their ultimate success to the outspoken utterances which have appeared in these letters. There are sundry other matters in the parturient stage to which he could have liked to lend a little obstetrical aid, such as it is in his power to offer. But a time comes when a correspondent must lay down his pen, and that time has arrived in this case. There is no longer the leisure which permitted of this correspondence being an agreeable pastime. As years advance, our interests are diverted into new channels. The advocacy of Dietetics in the Treatment of Disease is the absorbing topic with the writer at the present time. To him, indeed, it is the great therapeutic matter of the day, and he feels in duty bound to lend it what aid he can. Of the necessity of some systematic teaching of dietetics in a course of medical education no one can entertain a doubt. It is surely as desirable that a medical man be taught how to feed a patient acutely ill as how to prescribe for him. If it be a pyrexia, surely it is as desirable to maintain the strength, and call as little as possible upon the body-reserves, as it is to keep down the body-temperature by antipyretics. To prevent exhaustion both matters must receive attention. Every sick person is more or less a dyspeptic, and dyspepsia requires appropriate and suitable food. Many dyspeptics can alone perform their daily toil by a watchful attention to their food and food-requirements. The writer believes his labors have not been without influence in advancing our acquaintance with the means of increasing the energy of the cardiac contractions,—that our knowledge of the means of stimulating the respiratory centres owes something to his observations and experiments. He hopes to do something towards a more intimate familiarity with the kinds of food required by different morbid conditions, and to demonstrate that it is within our power to improve the action of the liver, when impaired, by reducing the demands upon it to the minimum of the body-needs, while raising its tone by certain remedial agents. Consequently he must bring to a close a labor which has been a labor of love, and say "good-by" to his many readers. When his correspondence began, the *Philadelphia Medical Times* was a lusty infant: now it is a stalwart youth, giving promise of enduring manhood. It has his good wishes for it in the future, as it has had them in the past.

J. Milner Fothergill, M.D.

NEW YORK.

OUR community has read and heard a great deal about hydrophobia lately, particularly since the Newark children were sent to Pasteur for inoculation. There has been some talk of establishing a Hydrophobia Institute here for the purpose of carrying out the new treatment. As to the value of Pasteur's method and the desirability of establishing an institute, opinions differ. This is but natural, for the question is a complex one, and perhaps with some there are influences brought to bear which would render their judgment not altogether impartial. If one should base his judgment on newspaper accounts, he might suppose New Yorkers were lovers of sensationalism; but when it comes to acting they are practical, and before putting their hands into their pockets they generally inquire, *Cui bono?* So, with regard to founding a Hydrophobia Institute, they ask, first, is it true that Pasteur has discovered a preventive of hydrophobia? Second, granting that it is true, is his method practicable and without danger? Personal interest may lead some to desire the founding of such an institute. Probably there are some physicians and members of the

laity who would like to see such an institution established, if for no other reason than that it would be a novelty and serve to bring the medical profession into prominence. Others, on the contrary, oppose it upon this very ground, believing that, if it should finally be proved that the alleged discovery has no foundation, it will bring discredit upon medical and scientific investigation in general, and upon special investigation as to preventive inoculation against disease in particular. There can be no overlooking the fact that inoculation against smallpox has been abandoned, and there certainly will be far less opportunity for establishing the efficacy of such treatment to prevent the development of hydrophobia.

Hydrophobia occurs rarely even in the dog. The dog may not bite a human being. A large majority of persons bitten by a really mad dog do not have hydrophobia. A number of months and even of years may pass before there occurs any active manifestation of the poison in the person bitten. It is not known, should the subject survive it, that one attack would afford protection against another in case the person should be bitten again. Moreover, there is a possibility that the virus employed against the development of hydrophobia may itself prove injurious, or even dangerous. These facts cause them to hesitate about going to the expense of building a special institution for the treatment of hydrophobia. But the numerous newspaper interviews with men who are said to have had special opportunities for learning all about Pasteur's methods, and the sending of the Newark patients to Paris for inoculation at the hands of the great Pasteur himself, have created a decided sensation, and it is not impossible that some of our people of wealth may be influenced to endow such a hospital. If they would do so, with the proviso that if the institution did not fulfil the object for which it was built the funds or the completed building should go to the Academy of Medicine, the undertaking doubtless would receive the approval of the medical profession of New York. As to the objection against founding an institution in this country that all patients could be sent to Paris for treatment (as Pasteur has suggested), it would not be entertained for a moment if there were no uncertainties about the diagnosis, or if full confidence were put in the method adopted by Pasteur.

The daily press shows quite a fondness for publishing reports of some rare and extremely wonderful operation, like trephining the skull or amputating a leg, performed by Professor A. or the great Dr. B. We know that one of the rules of ethics by which the medical profession is presumed to be governed is directed against seeking unseemly publicity or advertisement. But the ranks of the profession are overcrowded, and overcrowding means competition and rivalry. Consequently interviews with physicians, both young and old, continue to be easily obtained. For the same reason, there are many who would be willing to have wealthy people or the government found institutions which would pay them a salary for their services and at the same time give them publicity. There can be no harm if one who has specially fitted himself for a certain line of work or investigation desires employment in that direction, if it be of benefit to man; but due regard should be had for the rights of less enterprising members of the profession, who are not, however, less well qualified for the place.

We hear in this city comparatively little about the International Medical Congress. The majority of the profession, of course, have not a national reputation, and cannot expect to take much part in the meeting. Many of the more noted are "New Code" or "No Code" advocates, and would not expect to receive a very warm welcome under the existing condition of things, and others belong among those who are opposed to the action of the New Orleans meeting and of the Committee there appointed. They say, however, that if the original state of things were re-established they would do all in their power for the Congress; and if this course were adopted, probably our leading physicians would feel a special responsibility resting upon them to do all they could to make the Congress a success.

It is announced that Dr. H. B. Sands has resigned his surgical professorship in the College of Physicians and Surgeons, and that a concourse will be held at which Drs. W. T. Bull, W. S. Halsted, and R. J. Hall will take part, each delivering about ten lectures, after which the Faculty will decide which one shall fill the vacant chair. It is doubtful, however, whether Dr. Halsted's health will permit of his competing for the place.

At the annual meeting of the New York County Medical Association, January 18, 1886, Dr. Charles A. Leale was re-elected President, and Dr. P. Brynberg Porter Secretary. Dr. John F. Shrady was elected Vice-President.

It having been charged that our Board of Health was extravagant, as a consequence the amount appropriated to this department by the Committee on Apportionment has been cut down for this year. Extravagance existed in fact, and the medical members of the Board did not do what they could to prevent it. They certainly deserve censure: still, the value of their public services is undeniable: but it is a difficult task to bring the average politician to see the necessity of spending much money for so intangible a thing as the "public health."

Nearly a hundred papers have been prepared for presentation at the meeting of the State Medical Society, to be held February 2, 3, and 4, and if all shall be read there certainly will be no time for the discussion of

medical politics. The prospects are that the question of a Medical Licensing Board will not again be discussed before the Society, but it may again be brought before the Legislature during the winter. Mr. Lawson Tait, of Birmingham, England, will read a paper "On Methods of Diagnosis." The meeting promises to be an unusually interesting one from a scientific point of view.

Our medical colleges are all being well attended this session. The College of Physicians and Surgeons have not yet begun the foundation of their new college building. The graduating class at the Bellevue Hospital College will receive a course of lessons in histology and pathology free at the Carnegie Laboratory. Dr. Biggs, of the laboratory, is on a visit to Europe to make special investigations relating to bacteriology, and during his absence will visit the laboratories of Pasteur and Koch.

The Post-graduate Medical School deny the report that they do not admit women physicians to their course.

Neu-Yorker Medizinische Presse is the name of a German monthly, of which two numbers have been published. Dr. George W. Rachel is the editor. New York has a large German population, and many German-speaking or German-reading physicians, and this journal meets a long-felt want. Dr. Wallace Wood has brought out a journal called the *Journal of Reconstructives, Dietetics, and Alimentation.*

J. D. Bryant, M.D., has been reappointed Surgeon-General of the State.

Dr. C. L. Dana has been appointed visiting physician to Bellevue Hospital.

Prof. Austin Flint will deliver the Address in Medicine at the next meeting of the British Medical Association.

The Alumni Association of the University of the City of New York held its annual dinner at Delmonico's, January 14. Many had not ten dollars to spare, and consequently were not present; but those who went enjoyed themselves profoundly.

Now and then a case of smallpox is reported to the Board of Health, but all fear of an epidemic seems to have subsided. During the week ending January 12, one hundred and two cases of diphtheria were reported, of which forty proved fatal.

At the Orthopædic Society, January 4, Virgil Gibney, M.D., presiding, Dr. Newton M. Shaffer presented an improved lateral extension shoe for talipes with which he had corrected some of the severest cases of the deformity known as equino-varus, the patient being able to go about during the treatment. He also presented an improved knee-splint, and Dr. M. Josiah Roberts presented an improved hip-splint. At the same meeting Dr. Le Roy Hubbard read a paper on excision for chronic disease of the shoulder, and Dr. Yale presented an interesting specimen illustrating the lesions of acute osteomyelitis of the hip-joint.

At the County Medical Association, January 18, Dr. Lawrence J. McNamara read a paper entitled "A Contribution to the Etiology of Tumors," in which he expressed views adversely to the bacterial origin of cancer, and, incidentally, to the evolution theory, that an animal low in the scale of life may beget one higher. Dr. Janeway sent specimens illustrating epithelioma of the anterior wall of the œsophagus, causing paralysis of both recurrent laryngeal nerves by pressure.

At the meeting of the Section in Practice of Medicine at the New York Academy of Medicine, January 20, Dr. G. L. Peabody read a paper on "The Size of the Heart in Chronic Diffuse Nephritis," and a general discussion took place on the question "Are the Antipyretic Measures at Present Employed in Acute Disease Useful and Safe?" In his paper, Dr. Peabody showed that cardiac hypertrophy was less common in chronic diffuse nephritis than was generally supposed, and that the common clinical teaching that the presence or absence of hypertrophy of the left ventricle would enable the observer to diagnosticate the presence or absence of chronic Bright's disease had no substantial basis.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

AT a conversational meeting held at the Hall of the College of Physicians, Philadelphia, December 9, 1885, Dr. R. J. Levis, President of the Society, in the chair, a paper was read by Dr. James C. Wilson, entitled

THE CLIMATIC TREATMENT OF PULMONARY CONSUMPTION.

(See page 232.) This was followed by a paper by Dr. S. S. Cohen on

ARTIFICIAL CLIMATIC EFFECTS FOR "STAY-AT-HOMES."

(See page 339.)

DISCUSSION.

Dr. J. Solis Cohen: I think that we can all agree with most of the points mentioned by Dr. Wilson. There is great difficulty in selecting climates for those who are able to go away, and there is great difficulty in selecting the cases. My own opinion is that the cases which should be sent away, taking it for granted that those only are sent who can afford it, are those who are constantly "catching cold" from changes in the weather. They are to be sent away to avoid these changes. The best plan in selecting a climate appears to be that of finding out under what condi-

tions the patient is in the best health at home, and then to send him to a place where similar conditions are most constant.

Another important point, fully as important as the change of climate, is that the patient go to a place where he can obtain plenty of good food. The only hope of restoration in this, as in other chronic diseases, is from due nutrition. Medicinal and other treatment must be subordinate thereto. The secondary matters of avoiding places where there is overcrowding of sick people, of providing due occupation, amusement, etc., must also be considered in selecting the place of resort.

I should like to call attention again to a place already mentioned by the writer of the first paper. Lakewood is located some fifty-four miles from Philadelphia, in the midst of several thousand acres of pine forest, and here nearly all the benefit to be derived from such a climate can be obtained. In the winter-time, of course, it is necessary to wear shawls and wraps; but patients can often go out sleighing, and may almost dispense with the shawls and wraps when they reach the roads through the pine woods. There is a large hotel provided with sun-parlors, where patients may sit in the sun and take exercise in inclement weather. The patient can be readily visited by his friends, and even may come home from time to time for a day or two, if necessary, for business purposes. There are better accommodations for patients in moderate circumstances than at most places farther south, as the access to the New York markets is so easy that good food is readily procurable. If the physician paid more attention to these places near at home, there would be less necessity for sending patients to Aiken, Mexico, Colorado, Florida, California, and so on.

The idea that a patient with phthisis cannot in the winter-time subsist well in a cold climate has been found to be a mistake in many instances. This is a point to which attention is now being drawn. There are many who get along very well in Colorado, as they used to do so in Minnesota, and as they do in the Adirondack region. A patient who does well in cold, dry weather at home can go to such a locality and breathe fresh air, can take exercise in the open air, and will inspire and expire more deeply than at home, and thus be much benefited.

There is one other important point spoken of by Dr. Wilson, and that is that, when a patient finds a climate which agrees with him, he should make his home there. I have had several cases illustrating the value of this advice.

That the inhalation of compressed air and the use of antiseptic inhalations do a great deal of good I am convinced from an experience of many years. There are frequently cases in which we are unable to put our finger on any particular spot of pulmonary disease, and yet we are certain that respiration is not being carried on as it should be. There are probably certain unused areas of respiratory surface. In such cases the advantage of compressed air is soon apparent. Air is admitted to the lungs with more than the ordinary force. A little more force than that of ordinary voluntary respiration is all that is necessary. If too much force is used, there will be over-distention, and thus more harm than good will be done. Under the increased pressure the air passes into the unused portions of lung, sanguification is rendered more perfect, appetite is increased, and nutrition is improved. Antiseptic inhalations are not required in such cases. In a later stage, where there are a few crepitant or subcrepitant *râles*, without marked dulness on percussion, compressed air is also of service. Not only does it use the unused portion, but it exercises the sound portion of the lung and helps to clear out those accumulated products which are present, thus proving a better expectorant than anything that could be put into the stomach. By taking an inhalation just before going to bed, many a patient is enabled to clear out his chest and thus pass a comfortable night without the necessity for anodynes. At this stage, or later, when the parts are more or less sodden from retention of these materials, and when more or less decomposition is taking place, terebene, eucalyptol, creasote, and the other antiseptics may be used with advantage. It is not going to do a great deal of good if you simply give temporary inhalations of ten or fifteen minutes' duration. The patient should wear one of these zinc respirators all night. Their sieve-like construction enables the patient to breathe without being oppressed as in some other forms of respirator. There are other ways of conducting continuous inhalation of balsamic substances. A plan that I have often adopted, particularly with clergymen and other students, is to direct that a vessel filled with water be kept constantly before the fire in the study or sitting-room, and that a piece of rosin be thrown into the vessel from time to time. Another plan is to have some young pines growing in pots in the sitting-room. In this way the effects produced by residence in piny regions may be imitated, sometimes sufficiently to be nearly as efficacious.

There is a good deal to be done in the same line without apparatus. Prolonged inspirations, five to ten at a time, through a tube passing through the window-frame into the open air, is often very beneficial, especially on awaking from sleep. This plan may be repeated several times during the day with great advantage. Air enters the lungs under respiratory pressure, acting as does compressed air released from an apparatus.

I recall at this moment a marked illustration of the benefits of compressed air. Some

twelve years ago, a gentleman was brought from a distant city who with difficulty walked with assistance from the car to my door. He was placed on inhalations of compressed air, and in two weeks was so much improved that he was able to return to his home with an apparatus, which he used systematically. That gentleman was probably further advanced in phthisis than any patient that I have seen apparently recover. He is still living. I have had other similar but less striking cases. The best results have ensued where the patient has procured an apparatus for his own use at home, so that the inhalations could be taken systematically several times a day for prolonged periods. This is far better than intermittent inhalations in the office of the physician. And it is for this reason that efforts to simplify and cheapen the apparatus for pneumatic treatment of pulmonary diseases, rather than to complicate it and increase the cost, will be of benefit to the profession and to the community.

Dr. J. M. Keating: This is a subject in which I am much interested as a physician, having sent patients to many parts of the world, to Egypt, Cuba, Florida, etc., having accompanied them on some occasions, and once as a patient myself, as a convalescent from severe illness. Although the attempt at scientific precision in the analysis and classification of climate is most laudable, there are other matters to be taken into consideration, not less important, to which little attention seems to be given.

In the first place, it seems to me that the proper climate for a consumptive is an *equable* one. By that I mean an absence of sudden changes of temperature. I would go so far as even to include in this marked differences between day and night. This statement being accepted, the mean average temperature of the climate we select, whether it is to be cold or warm, depends on the patient; that is, sex, previous occupation, tastes, character of the disease, and the stage of the disease. There are some people who cannot bear a cold climate: this is especially so with delicate women, aged people, and of course those with advanced disease. Then, again, we should choose a place where there is much sunshine and a soil capable of readily absorbing superfluous moisture, and consequently free from malaria. I believe that there is very little specific effect to be derived from atmosphere except from its purity, freedom from dampness, and possibly in some cases the balsamic vapors it contains. Good food and abundance of it is just as important as pure air. Elderly men and delicate women do far better in a warm climate, because they can live continuously in the open air. It is on this account that sea-voyages are so useful in such cases. But young men in the earlier stages of phthisis or with an obstinate bronchitis should be sent to a section of country where they are obliged to live in the open air, but where a large amount of exercise is encouraged by a bracing atmosphere.

As I have said, it is necessary to know about the place to which we are sending our patients. You may say, "Go to Florida;" but there are more climates in Florida than in Pennsylvania. The patient may go to Jacksonville, and yet for pulmonary troubles this is certainly a treacherous place. There are here many very sudden changes, from intense heat to frost, severe storms, with cold and damp northeasters. St. Augustine is worse. Here, in addition to the above, there is a dust of coquina, or pulverized shells. The hotels are most comfortable; that is, for those who can afford to pay enormous prices. If your patient is not wealthy, he or she had far better stay at home. If you have decided that fresh air and sunshine are imperatively demanded, and the cold weather and sudden changes at home preclude any arrangements by which the said ends can be so supplied, and the patient is wealthy, there are many places near at hand to which he can go. There is Aiken, and Thomasville in Georgia, with delightful hotels, and many other places in the vicinity presenting the same characteristics. If your patient wishes to avoid any frost, you are safe in sending him to Enterprise, Florida; or, keeping away from the river and continuing down the spine of the peninsula, with the same sandy soil and pine forests we strike Altamonte, Winter Park, and Orlando, in Orange County, Florida.

I am satisfied that very ill cases with unfavorable prognoses should remain by all means at home. I have witnessed too many sad scenes, and have met with too many unfortunates who sought improvement and relief without the least prospect of amelioration, and who found nothing but expense, discomfort, bad food, exposure, and homesickness, to repay them for efforts which in the long run shortened their days. When you send very ill patients away, send them as near home as possible.

It is interesting to see that local treatment of pulmonary diseases is engaging so much attention, and from Dr. Cohen's paper we gain much information most useful to us as active practitioners. The largest number by far of our consumptives cannot get away: we have to treat them in our hospitals or in their homes. We have apparatus which can be readily used to inhale medicated air by the patient, and, with nutritious diet, equable temperature, pure air in abundance, and moderate exercise, we can accomplish a great deal for those who cannot afford the great expense of travel.

I believe that, so far as altitude is concerned in the treatment of phthisis, the tendency to overrate its importance is not so marked as in the past.

Dr. Edward T. Bruen: I have been much interested in both of the papers of this evening. The first paper touches upon a phase of the subject of the treatment of phthisis by climate which I have considered to a certain extent. My thoughts have been in the direction of obtaining some solid basis for advice to patients as to change of climates. The minor points to which reference has been made are to be considered; but I think that one of the main conditions that we are to look for in a climate is purity of air. The popular habit for many years has been to send patients to pine-regions, and these localities are known to furnish continuous supplies of ozone. With reference to purity of atmosphere as being a chief consideration, I may say that I have recently read a pamphlet by Schreiber, of Vienna, who gives the following facts: In Iceland, 65° north, where the coldest temperature reached is —28°, and the highest +56°, and the mean +40°; in Madras, in the torrid zone, in latitude 13° north, where the coldest temperature is +77°, the hottest +88°, and the mean +81°; and at a point in the temperate zone in latitude 51° north, where the coldest temperature is +3°, the hottest +69°, and the annual mean +35°,—in each of these localities there is freedom from consumption: the argument being that in each of these localities we have other conditions than the atmospheric influences operating.

It has been noticed that in high altitudes phthisis has increased when manufacturing establishments have been introduced. On the other hand, it has been found that the proportion of phthisis decreased in low meadow-lands where the inhabitants lived an out-of-door life. If pure air be a desideratum for this class of cases, we can obtain this pure air near at home. I have had reason to form a very favorable estimate of the value of Lakewood and the surrounding region. In some of the neighboring counties of Pennsylvania we can obtain this purity of air as well as in distant localities. Some fifteen years ago, McCormack, an English physician, wrote on the importance of rebreathed air as a factor in the development of phthisis, and advised that people sleep with open windows and with a free circulation of pure air in the chambers of those suffering under pulmonary diseases. We can thus see that this subject has for a considerable time occupied medical thought. With pure air we must have a maximum amount of sunshine, and a warm or cool climate, as is most agreeable to the constitutional peculiarities of individuals.

Although I have not used the methods of Dr. S. S. Cohen, I have always followed the principle involved, and have employed light gymnastics to stimulate the respiratory muscles and thus secure as perfect inflation of the chest as possible.

It goes without saying that in a wasting disease such as phthisis the diet question is of great importance, and must be considered in connection with any climate.

In reference to the Colorado climate, while it possesses many advantages, I have learned by correspondence with patients that sudden and great changes in the thermometer often occur. In one case the temperature ranged in one day from zero, Fahrenheit, to plus seventy degrees. One other point: the water of a locality should receive considerable attention; and this is an objection to Colorado and New Mexico, where the water is largely limestone and not very pure. Dr. J. S. Cohen's mode of climatic selection seems very practical.

Dr. L. F. Flick: I have been much interested in the discussion of this evening, because at one time I was myself sent in search of a healthy climate. I think it is a question whether climate has as much to do with the benefit derived as the change of habits of life. My experience has been that the individual who takes plenty of out-door exercise improves, while he who expects to get benefit simply from the climate is doomed to disappointment.

In my own case I attribute my improvement to work in the open air with forced alimentation. I sometimes took as high as six to eight quarts of milk a day, and in sixteen months I gained fifty pounds.

I think that too much stress has been laid on climate. I think that in Pennsylvania we can get as much benefit as anywhere in the country. The Lehigh Valley and the Alleghany Mountains furnish as good climates as can be found anywhere. In certain places in these regions consumption is never heard of. A matter that has struck me forcibly is that where consumption is not heard of malarial troubles are likewise absent. By sending patients to these resorts near home they are saved much unnecessary expense.

A point which Dr. Bruen has called attention to in connection with certain climates spoken of by him applies equally well to the Western climates: namely, the great amount of dust. This holds good especially in regard to Colorado, New Mexico, and Arizona. Another point in reference to these climates is that, while the temperature may be equable, there are great variations between day and night. In such regions patients should not go out except while the sun is shining.

Dr. William M. Welch: I rise simply to ask Dr. Cohen if he has had any experience in the use of rarefied air. I have somewhere seen a description of an apparatus intended to contain rarefied air for therapeutical purposes. I recollect that Dr. Dennison, in his work on "Colorado as a Health-Resort," speaks very positively of the beneficial effects of that climate on asthmatics. The patient does not have to live in that climate any length of time before benefit is obtained, but

it comes at once. As one of the peculiarities of the climate of Colorado is great rarefaction of the atmosphere, it seems reasonable to suppose that rarefied air, artificially produced, should be of service in the paroxysms of asthma.

Dr. Neff: The instrument referred to is probably that which has been used in Brooklyn by Dr. H. F. Williams. The patient is surrounded with an apparatus in which the air can be condensed or rarefied. The process is termed pneumatic differentiation. I notice in reading the reports of cases treated in this way that hæmoptysis is not considered a contra-indication for this plan of treatment, and even in threatened hemorrhage this treatment has been used. In the neighborhood of a hundred cases have been reported as treated by this method, with very favorable results, by Dr. H. F. Williams,* of Brooklyn, Dr. A. S. Houghton,† of Chicago, and Drs. De Watteville and Seigel. Several of these cases were under the observation of the late Dr. Armor, of Brooklyn, and Dr. Alfred Loomis, of New York. It seems to me that the use of compressed air would be contra-indicated where there is any tendency to bleeding.

Dr. J. Solis Cohen: I would say, in reply to Dr. Welch's query, that I have had considerable experience with the use of rarefied air. It offers beyond question the best method of treatment in recent cases of asthma and in asthma in young persons. Expiration into rarefied air is better than inhalation, in most instances. Dr. Neff is correct in thinking that the breathing of compressed air increases the tendency to hemorrhage. The pressure on the blood-vessels is increased, and, if there is a tendency to bleeding, this favors it.

Dr. Frank Woodbury: The remarks of the lecturer and of Dr. Cohen with reference to the sending of invalids to health-resorts near at home struck me as being very pertinent. It is a matter to which the attention of physicians needs to be frequently called. A man 26 years of age came to consult me last summer with every evidence of rapid consumption and enormous fatty liver. He had been ordered to go to Colorado. I advised his father to send him to a place nearer home, where, if necessary, he could be reached in a short time, or from whence he could return in case he desired to do so. At my instance he was sent to Kane, in the northwestern part of Pennsylvania, where he improved greatly during the first two weeks, taking long walks and sleeping well. Unfortunately, he did not control his appetite, and he made blood so fast that his blood-vessels could not stand the increased tension, and one day he was taken with hemorrhage from the nose and kidneys, and died in less than forty-eight hours.

I wish to take this opportunity of again mentioning Kane as among our available mountain health-resorts for consumptives. It is known by reputation to many physicians of this city, from the fact that some of our prominent physicians have been in the habit for years of sending patients there; but it is not so well known as it deserves to be. After personal investigation, I pronounce it better adapted for such cases than many more fashionable resorts, and the expenses are much less than at the latter.

There is one element which has not been referred to in the discussion, and that is that the patient is liable to be affected by homesickness. We know that a man in ordinary health may die with homesickness. If it is so depressing to a man in health, who has so many resources, how much more is it likely to be so in a sick person who is removed from his customary surroundings! This is another point in favor of health-resorts that are easily accessible, such as those mentioned by those who have preceded me in this discussion.

I should like to make a few remarks in regard to consumption, which, however, may sound a little heretical. This disease has been the subject of medical investigation for thousands of years, and in that time I think that we have reached some valid conclusions, based upon clinical and pathological studies, as to the best methods of treatment. These advances are not dependent upon, nor have they been disturbed by, recent progress in bacteriology, and they will remain the property of the profession after much of the recent interest in bacteriology has subsided.

I would particularly like to direct your attention to the fact that the value of climatic treatment was established before the present idea of contagion or particulate infection was thought of. Dr. Joseph Parrish, of Philadelphia, satisfactorily established the truth of this in his own practice and in his own person.‡ Permit me to state very briefly that, to my mind, consumption, as we use the term clinically, need not be a specific disease at all. On the contrary, there are cases in which it appears to be essentially a form of systemic degeneration or decay, a process of necrobiosis, and, in a broad sense, where it may be taken as an expression of a want of harmony between the human organism and its environment. It is the resultant of a large number of factors which cannot be considered at the present time, prominent among which are those which depress the vitality and which conspire to form the peculiar susceptibility or vulnerability which is universally acknowledged to exist. It has been well said by Dr. Keating, there are some patients who are in-

* New York Medical Journal, October 3, and Medical Record, January 17.

† Journal of the American Medical Association.

‡ The reader is referred to the Proceedings of this Society of March 22, 1882, for more extended consideration of this subject, in a discussion on the "Rational Treatment of Consumption."

capable of surviving in a cold climate. To such individuals the climatic treatment is just as applicable as taking a drowning person out of water and putting him on the land. Although man may live in all climates, yet all climates are not equally habitable by all men. Speaking broadly, each is adapted individually to inhabit a particular climate; a climate which is suitable for one class is unfit for another class: when the conditions are so unfavorable that acclimatization is impossible, the individual must die, and the mode of death in the majority of cases would, in all probability, be by consumption. As may be inferred from what I have said, I do not consider consumption as merely a disease of the lungs. In a large proportion of cases it is a disease of the whole organism, just as one form of Bright's disease is an affection of the entire system. The presence of a parasitic micro-organism in the lungs would in such cases constitute an incidental element, which, however, demands our consideration, since it may possibly influence both our therapeutics and our prognosis.

Dr. S. Solis-Cohen: I have but a few words to say in closing the discussion. Before adverting to the remarks upon my own paper, permit me to express my appreciation of the masterly essay of Dr. Wilson. I think he has very clearly shown what may be expected from change of climate, and what considerations should govern us in sending patients from home. The object of the plans of treatment which I have brought forward this evening is not to keep everybody at home, but simply to relieve those who either cannot get away at all, or can go away only for a very short time during the most unfavorable season at home. I have been much impressed by my experience with the benefit of out-door life, even in Philadelphia, and I insist upon patients going out to the Park or elsewhere, whenever the weather permits.

Dr. Neff has alluded to what is called "pneumatic differentiation." This is a new name for an old measure practised for a number of years. There is nothing new in the principle, though there may be in the mechanism of the particular appliance to which he refers. As our object, however, is to extend the benefits of pneumato-therapy to those who cannot afford to go away from home, I am not inclined to view with favor anything so preposterously exclusive and expensive as is that apparatus at present. Hauke, the first to construct a portable apparatus for compressed air, has devised a sort of pneumatic cuirass, by which the air about the thorax may be rarefied, the patient breathing either ordinary air, compressed air, or any desired gas or vapor. This is a cheaper and, I should think, equally efficacious means of accomplishing the same result. I did not allude to inhalations of rarefied air in the paper, because I referred to nothing but consumption. I can confirm the statement that rarefied air is of decided advantage in asthma. I did allude, however, in the paper to expiration into rarefied air. While a patient inspires compressed air from one apparatus, he may, by a little arrangement in the stop-cock, expire into rarefied air in another apparatus. This was advised by Waldenburg more than ten years ago. You can call it "pneumatic differentiation" if you choose.

In reference to the question of hemorrhage from breathing compressed air, it may savor of temerity to differ from him to whom I owe my knowledge of these subjects, but I have had two cases which do not support the proposition. One of these cases is that of a woman referred to me by one of the gentlemen present this evening. She is of exceedingly bad family history, two brothers and a sister having died in hemorrhage. She had had several attacks of hæmoptysis, and was much depressed in body and mind. She was put on the use of compressed air, and had no further hemorrhage until six months after the treatment was stopped. She then had two hemorrhages, and the treatment was renewed for a short time. Since then there has been no further bleeding. Her spirits are excellent, the pulmonary signs are stationary, and she has gained thirty pounds in about eighteen months. The other case is that of a man now under treatment for advanced phthisis. He had one or two hemorrhages prior to treatment by compressed air. Since its institution, some six months ago, he has greatly increased in flesh and strength, is able to attend to his business, and has had no further hemorrhage. I do not say it has prevented hemorrhage; but in these predisposed cases it certainly has not occasioned any loss of blood.

NEW YORK PATHOLOGICAL SOCIETY.

THE annual meeting was held January 13, 1886, the President, JOHN A. WYETH, M.D., in the chair.

REPORT OF THE COMMITTEE ON MICROSCOPY.

Dr. WALDSTEIN, of the Committee on Microscopy, said that the specimen presented at a recent stated meeting by the President was a tuberculous testicle; the other specimens presented by the President, being small tumors removed from the antitragus, were cartilaginous.

PERIOSTEAL SARCOMA OF THE RIGHT FEMUR.

Dr. A. G. GERSTER presented a portion of the right femur, the seat of a large periosteal sarcoma, removed by amputation from a girl 26 years of age. The patient had fallen down-stairs, but suffered no serious injury. From that time, however, she began to have difficulty in bending the knee and in going

up-stairs. A tumor formed over the outer condyle of the right femur, which Dr. Gerster believed to be a sarcoma. At one point there was some movement in the tumor which led Dr. Fluhrer to suspect enlarged popliteal glands, and Dr. Markoe thought it was probably an osseous growth with a narrow pedicle and mushroom-shaped top. Amputation proved it to be a periosteal sarcoma limited to the diaphysis.

MYXO-SARCOMA OF THE TESTICLE.

Dr. GERSTER presented a myxo-sarcoma of the testicle, the size of his fist, removed from a patient 32 years of age. The cause was obscure, as there was no history of injury or inflammatory condition to account for it.

OPERATION FOR PARTIALLY-DESCENDED TESTICLE, FIBROMA, AND HERNIA.

Dr. GERSTER presented specimens removed from a man 30 years old who since early boyhood had noticed only one testicle in the scrotum, When he was about eighteen years old a hernia appeared on that side; and, inasmuch as the patient could not wear a truss, on account of the pain which it produced, the hernia developed into rather large proportions. Within the past five years the patient noticed a body descend alongside the hernia, which probably was the atrophied testicle. Being unable to attend to his business, which required him to stand, he consulted Dr. Gerster, who found an incompletely-descended testicle and a hernia. There was a considerable portion of omentum which could not be completely reduced. At the operation, a body was found external to the sac, which proved to be fibrous tissue, the result of an inflammatory process. The sac was opened, the omentum, which was extensively adherent to the sac and inguinal canal, was easily dissected up, deligated in several pieces, cut off, and the stump replaced in the abdominal cavity. The sac was transfixed at its neck with a catgut suture, which could be compared to the string of a purse drawn tight. The sac was then cut off and the stump placed in the inguinal canal. The pillars of the external ring were brought together, leaving a little slit for the spermatic cord. The atrophied testicle was removed. The patient did well, and was afterwards dismissed from the hospital with the advice to wear a truss. Dr. Gerster thought a radical cure of a hernia of this size was doubtful, and with regard to so-called radical cure of hernia by injections, he did not believe it took place. Benefit, however, might result if the patient were enabled to wear a truss.

The PRESIDENT said, regarding the radical cure of hernia, that he had operated in about twenty cases, and he was certain of a cure in only one case in which he did Heaton's operation. He always advised the use of a truss subsequent to the operation.

RETENTION-CYST OF THE SUBMAXILLARY GLAND.

Dr. GERSTER presented a mucous cyst removed from the floor of the mouth of a man 26 years of age. It had been diagnosticated as a ranula, and an incision made into it through the oral cavity, by another physician, but the sac refilled, forming a tumor which seriously interfered with deglutition, and even with respiration. After extirpation, which was done in October last, the tumor was found to be a retention-cyst of the submaxillary gland. It had developed towards the median line, producing the impression that it might be a dermoid cyst. The facial and lingual arteries had to be deligated during the operation.

FIBROMA OF THE RIGHT VOCAL CORD REMOVED BY MACKENZIE'S FORCEPS.

Dr. C. H. KNIGHT presented a specimen which was removed from a man 47 years of age, who two years ago began to have trouble in speech and from coughing. During the operation hydrate of cocaine was employed. Six days after the operation the voice was natural.

CONGENITAL ABSENCE OF THE LEFT KIDNEY.

Dr. T. MITCHELL PRUDDEN presented the somewhat enlarged right kidney removed from the body of a man 22 years of age, who had given no symptoms of renal disease, and who had died with pulmonary phthisis and tubercular meningitis. The left kidney and ureter were absent, there being not even a rudiment of those parts. The specimen was worthy of presentation, as it was desirable to have exact statistical knowledge with regard to this malformation, as bearing upon nephrectomy. According to Gootmann, within twenty-five years previous to 1883 there had been but seventy cases of solitary kidney put on record.

Dr. W. M. CARPENTER saw, two or three years ago, at least three cases of absence of one kidney at autopsies made at Bellevue Hospital. He had seen no case before nor since. Dr. Welch found but one kidney in the body of a late New York surgeon.

Dr. W. P. NORTHRUP said that of a thousand autopsies on children he had found two thousand kidneys.

Dr. GERSTER had, in operating on a baby for imperforate anus, mistaken an enlarged ureter for the intestine, punctured it, and at the autopsy found it belonged to an only kidney.

SUPERNUMERARY MAMMARY GLAND.

Dr. A. JACOBI presented, in behalf of a candidate, a specimen removed from the left axilla of a woman 27 years of age. She first noticed a tumor about the fifth month of her third pregnancy. There also appeared a small tumor in the left breast, and, inasmuch as a near relative had died of cancer, she

feared that the disease was malignant. Dr. Jacobi, who saw the patient, diagnosticated a supernumerary gland in the axilla, notwithstanding the absence of a nipple. The tumor in the axilla was removed, and was found to be a chain of milk-secreting glands with no external duct or connection with the mamma of that side. After its removal the small tumor in the left mamma disappeared.

Dr. GERSTER thought that supernumerary mammæ in the vicinity of the axilla were more common than was generally believed, particularly in well-nourished women. They usually had an excretory duct leading to the mamma, but apparently they constituted a separate gland. A fact of some importance was that these axillary bodies sometimes became carcinomatous, the malignant process affecting the adjacent structure of the mamma proper secondarily. He mentioned such a case in which Dr. Waldstein made the microscopical examination for him.

Dr. JACOBI said that the remarks of Dr. Gerster made the candidate's case still more interesting. First, the woman was thin; secondly, she had not a very large mamma; thirdly, she had not noticed anything during her first two pregnancies, and it was only during the third that the tumor appeared.

Dr. WALDSTEIN remarked that, as Dr. Gerster had said, supernumerary mammæ were not very rare, but they nearly always had a nipple of their own, while in the case of the candidate there was none. He would also take the liberty of adding that during his examination of the specimen he found the axillary glands tumefied and containing cholesterin, showing that the milk secreted by the gland without a natural outlet was being cast out through the lymphatics.

GENERAL TUBERCULOSIS.

Dr. L. EMMET HOLT presented the lungs of a child, 4 months old, which died after a few days' illness, having tubercles in various organs of the body and slight pneumonic consolidation. The specimens were chiefly interesting in connection with the symptoms.

DIPHTHERITIC CROUP.

Dr. W. P. NORTHRUP presented a portion of lung from a child, showing the wide distribution of the membrane in membranous croup or diphtheritic croup. In the specimen presented the exudate occupied not alone the larger bronchi, but extended to within half an inch at most of the base of the lung. On looking over the records of the Foundling Asylum, in which this case occurred, he found the extent of distribution of the membrane given in sixty-one fatal cases of laryngeal diphtheritis or membranous croup: extending from the pharynx to the finest bronchi, twenty-two cases; from the pharynx to the bifurcation of the trachea, nine cases; from the larynx to the first division of the bronchi, twenty-one cases; from the larynx to the second division of the bronchi, four cases; to the fourth division, three cases; over the pharynx and trachea, two cases. In forty-nine cases croup was the first symptom; in twelve cases membrane in the pharynx was the first indication. Pneumonia occurred in forty-four cases.

Dr. Northrup also presented Dr. O'Dwyre's tube, used in the asylum for the relief of dyspnœa. Dr. O'Dwyre had spent five or six years in perfecting the tube, and it could now be used in private practice, although a little skill was required in introducing it through the glottis. It never failed to relieve dyspnœa in cases of croup. In the asylum they were accustomed to remove the tube once in about twenty-four hours, but the symptoms usually called for its replacement in a short time. A little of the milk given for nourishment would enter the tube, and after the act of coughing to expel it the child could breathe more freely and would go to sleep. Should the tube become clogged, severe coughing would cause it to be expelled. There had been only a slight loss of epithelium at the point where the end of the tube impinged upon the trachea; the vocal cords had not been affected.

At the executive session the following officers were elected: John A. Wyeth, M.D., President; T. Mitchell Prudden, M.D., Vice-President; Wesley M. Carpenter, M.D., Secretary; John H. Hinton, M.D., Treasurer; John C. Peters, M.D., Editor; Frank Ferguson, M.D., Assistant Editor; John C. Peters, M.D., T. M. Prudden, M.D., L. Emmet Holt, M.D., W. P. Northrup, M.D., and Louis Waldstein, M.D., Committee on Ethics; H. Marion Sims, M.D., and E. C. Wendt, M.D., Members of Committee on Publication.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held January 21, 1886, the President, A. JACOBI, M.D., in the chair.

REFLEX SYMPTOMS IN NASAL AFFECTIONS.

Dr. E. GRUENING opened the discussion on this subject with a paper on reflex ocular symptoms in nasal affections. The basis of his remarks was clinical observation. When we touch the nasal mucous membrane with the probe, reflex ocular symptoms will follow, such as lachrymation, conjunctival hyperæmia, photophobia, and sneezing; and nasal symptoms may be evoked in some persons by exposure of the eyes to a bright light. In a number of patients he found ocular symptoms, such as lachrymation, sensitiveness to ordinary light, and redness of the eyes, when examination of the eyes revealed no lesion which would account for the existence of such symptoms. For such cases collyria, hot and cold applications, etc., have been tried, but without benefit, whereas treatment directed

to the mucous membrane of the nose resulted in immediate relief of the ocular trouble. Dr. Gruening related the histories of a number of cases of ocular symptoms cured by treating the Schneiderian membrane. The cases did not include eye-symptoms which could be traced to extension of the nasal disease up the lachrymal duct. The treatment directed to the nose would depend upon the nature of the affection. Of course, all cases of ocular trouble would not yield to measures directed against an abnormal condition of the Schneiderian membrane, but he had a series of one hundred and fifty cases which justified him in drawing the conclusion that there existed a relation between the nasal and the ocular affection. Common features of the cases were burning and smarting sensation in the eyes, inability to fix vision, increased vascularity of the conjunctiva, absence of important lesion of the eyes and their appendages, and the inefficacy of treatment directed to the eyes, while the condition was relieved by measures adopted for the cure of the nasal disease.

Dr. T. A. McBride read a short paper in which he gave the histories of five cases of migraine and other neuroses which were relieved by treatment directed to the nose. He himself had not pronounced upon the nasal affection, but the cases had undergone treatment at his hands for the reflex symptoms, and, not being cured, the patients were seen by rhinologists who treated the nasal affection with the result of curing the migraine, supra-orbital neuralgia, gastric disturbances, etc.

Dr. Beverly Robinson read a paper limited chiefly to the connection between nasal disease and hay-fever, so called, and asthma. There were various other reflex disturbances occurring in connection with nasal symptoms of which he made mention. Regarding hay-fever and its connection with nasal disease, the results of operations for the nasal disease by Daily, of Pittsburg, and Mackenzie, of Baltimore, and many other rhinologists who had followed in their footsteps, offered abundant proof of such connection. While in many cases symptoms not directly connected with the nasal passages might disappear on instituting treatment for nasal disease, yet such cases did not occur sufficiently often to justify us in employing prolonged nasal treatment with the hope of curing secondary or reflex conditions. There must be an individual susceptibility before nasal disease would produce a reflex neurosis. First search should be made for other possible causes of the reflex phenomena, and, failing, we would then be justified in turning our attention to the nasal passages. This, however, did not mean that recognizable nasal disease should be allowed to go untreated. With regard to the question whether the sensitive area of the nasal mucous membrane was very limited or widely distributed, the speaker was inclined to take a middle view. He thought the continued use of cocaine spray would result in increased rather than diminished congestion of the mucous membrane. Dr. Robinson devoted a few remarks to treatment, and said that among palliative measures carbolic acid was a favorite remedy with him. But there were cases in which time spent in using palliative measures would be worse than thrown away, and we should proceed at once to use the galvano-cautery, etc.

Dr. Goodwillie continued the discussion, presenting some models of cases in which there had been deviation of the septum, exostosis, etc., causing various reflex symptoms. He also presented some instruments for operating upon the diseased nose.

The paper was further discussed by Drs. Baruch, Schweig, and the President.

The President had, during the course of a number of years, observed hundreds of cases of local choreic movements in children, such as blinking of the eyes, twisting the corners of the mouth, shrugging one or both shoulders (called bad habits), associated with chronic or subacute pharyngeal or nasal catarrh, or with conjunctivitis. Many such cases terminated in general chorea. Very often the rhinitis or pharyngitis began in the pharyngeal tonsil, a fact to which little attention had been called. He had always found chronic rhinitis associated with pharyngitis, or chronic pharyngitis associated with rhinitis. But it was not always necessary to treat the entire inflamed membrane: often treatment applied to a part would result in a cure of the general pharyngitis and rhinitis. Troutmann had very recently reported one hundred and fifty cases of enlarged pharyngeal tonsil, eighty-seven of which were complicated by hemicrania. Of the eighty-seven, all but two were cured by destroying in part or completely the enlarged pharyngeal tonsil. In one of the two not so cured there was a nasal polypus. It would seem that disease of any portion of the naso-pharyngeal cavity might give rise to the reflex symptoms alluded to during the discussion.

REVIEWS AND BOOK NOTICES.

The Principles and Practice of Medicine. By the late Charles Hilton Fagge, M.D., F.R.C.P., etc. Including a section on Cutaneous Diseases, by P. H. Pye Smith, M.D., etc., Chapters on Cardiac Diseases, by Samuel Wilks, M.D., and Complete Indexes by Robert Edmund Carrington, M.D., etc. Volume I. Philadelphia, P. Blakiston, Son & Co., 1886. 8vo, cloth, pp. 1040.

During the last twelve years of his valuable life Dr. Fagge was constantly occupied in preparing a Treatise on the Practice of Med-

icine, in which he intended to collect the rich results of his many investigations and large experience, basing it to a great extent upon his laborious researches into the pathological and clinical records of Guy's Hospital during the twenty years in which he was connected with this great metropolitan hospital as registrar, pathologist, and physician. Endowed by nature with wonderful powers of memory, he was familiar with modern medical literature, while his work in the wards and dead-house afforded him almost unequalled opportunities of obtaining extensive experience, which his numerous contributions to medical literature showed that he diligently improved. The results of this work appear in the System of Medicine to which he gave so much thought and labor. The first volume contains an Introductory Chapter defining disease, and discussing Symptomatology, Etiology, and Prognosis. This is followed by a section on General Morbid Processes, Contagion, Fever, Inflammation, Tubercle, Tumors, and Syphilis. Specific Diseases occupy the next section, followed by Diseases of the Nervous System, and Neuroses, while a section of Diseases of the Respiratory System concludes the work.

The style is lucid, interesting, occasionally familiar, even discursive, and the book, on the whole, is not only highly readable, but is a rich mine of experience. The judicious editing of Dr. Pye Smith has greatly enhanced its value.

LECTURES ON THE DISEASES OF THE NOSE AND THROAT. Delivered during the Spring Session of Jefferson Medical College. By CHARLES E. SAJOUS, M.D., etc. Illustrated with one hundred chromo-lithographs from oil-paintings by the author, and ninety-three engravings on wood. Philadelphia, F. A. Davis, attorney, publisher, 1885. 8vo, cloth, pp. 439.

This handsomely-printed and freely-illustrated work is one upon a subject in which the general practitioner is directly interested, since the habits of life of modern civilization make disorders of the upper air-passages among the most common ailments.

The technique of laryngoscopy and rhinoscopy is considered, with the instruments used for cleansing and medicating the throat and nasal cavities, and the several diseases of these portions of the body are considered, with the therapeutic applications. It is no small advantage that the plain, concise, though explanatory, language employed in lecturing before students has been preserved, and abstruse pathological discussions avoided. An exception, however, to this is made in favor of hay-fever, for which the author has suggested a new title, "Periodical Hyperæsthetic Rhinitis," which corresponds with recent ideas concerning the pathological process involved, and to a certain extent suggests its rational treatment. The treatment of various disorders receives a large share of attention, and the advice is judicious and based upon extended experience. The industry of the author is exemplified in the numerous drawings and oil-paintings from nature, which are reproduced by chromo-lithography and add decidedly to the usefulness and attractiveness of the book.

NEW REMEDIES AND CLINICAL NOTES.

THE TREATMENT OF PNEUMONIA BY QUININE.—F. P. Atkinson, M.D., says (*Practitioner*) that, "if the Collective Investigation Committee of the British Medical Association have done no other good, they have certainly directed attention to the treatment of pneumonia by quinine, which is destined, I think, sooner or later, to supersede all methods now in vogue. There can be no question that in almost every case (and I think there are very few exceptions) it prevents the disease advancing beyond the first stage, and rapidly causes resolution to take place. It does away with the necessity for poulticing, all that is required being the application of cotton-wool to the front and back of the chest. My friend Mr. Corbett, who has a good series of charts to bring forward, tells me it is equally successful in cases arising in young infants as it is in adult cases, and he asserts that many children he has been able to pull through would, in old times, certainly have been lost. He gives an adult two grains every two, three, or four hours, according to the case, combined with hydrobromic acid, and, if there is any delirium, a few drops of tincture of digitalis. If there is any large deposit of urates in the water, he gives some citrate of potassium alternately with the quinine. This method of treatment I have followed out with decided benefit to my patients and satisfaction to myself.

"Now, any one who has given repeated doses of quinine to a patient will, no doubt, have noticed the profuse sweating that occurs after its administration; and I am anxious to find out as to whether quinine really acts curatively through the perspiration it produces, or its antiseptic action, or both? In some cases of menorrhagia it exerts a very decided influence upon the muscular tissue of the uterus: has it any influence upon the muscular coat of the arteries in pneumonia? An answer to these questions would, no doubt, help us not only in the treatment of pneumonia, but also many other febrile diseases."

MERCURIAL INUNCTIONS IN PNEUMONIA.—In the *Voënna-Sanitarnoë Delo*, No. 26, 1885, p. 285, Dr. S. Sher, of Proskurov, Podolsk government, writes that the treatment of croupous pneumonia by local applications of

cold and by rubbing in gray mercurial ointment (two drachms daily) seems to be very effective, since it apparently relieves the symptoms and shortens the course of the disease, the average duration of the latter (from rigor to defervescence) being only five days. Of seventeen cases treated after this method, only one ended fatally. In five of the cases both of the lungs were affected.—*London Medical Record.*

The Prevention of Hydrophobia.—The *Indian Medical Gazette*, in commenting critically upon Pasteur's experiments, declares that the cases which had been communicated "are inconclusive in a high degree. Take Meister's, on which most stress is laid. It is not at all certain that the bite was effective, or that hydrophobia may not still occur. Altogether, these experiments, however interesting and sensational, are by no means devoid of serious fallacies, and, for the present, the prevention of hydrophobia must be essayed on other lines."

The Combined Effects of Morphine and Paraldehyde.—Morphine increases the effects of paraldehyde, as it does those of chloroform and chloral. It not only prolongs the sleep induced by efficient doses of paraldehyde, but renders small inefficient doses active. Thus the author found that one centigramme of hydrochlorate of morphine and one gramme and a half of paraldehyde, when given separately to a rabbit weighing about two kilogrammes, produced no hypnotic effect; but the same quantities given together caused deep sleep, lasting for several hours. Unlike chloral and other hypnotics, paraldehyde has no harmful secondary action. The simultaneous action of morphine and paraldehyde was found by the authors, in a careful series of experiments, to increase the frequency of the heart; the arterial blood-pressure is maintained, respiration being less frequent than in normal sleep. They recommend the mixture as a powerful hypnotic, not depressing the functions of respiration and circulation, but acting rather as a heart-tonic. The mixture, too, has the advantage of being a union of a hypnotic and an analgesic, and thus is indicated in many pathological conditions in which neither paraldehyde nor morphine can be given alone.—*Annali di Chimica Medico-Farmaceutica*, August, 1885: *London Medical Record.*

Aromatic Sulphuric Acid.—The addition of cinnamon to an alcoholic dilution of sulphuric acid was probably practised originally in order to increase its astringency; but it has been found that in the presence of sulphuric acid and oxygen this astringency is rendered inert. Catechu, on the contrary, is free from this objection, and has, according to R. Rother, the property of preventing such change over similar agents liable to these objectionable alterations, and he advises its addition to the officinal formula. The addition of cardamom he also recommends as a grateful and efficient aromatic, the short variety being the best. The following is the formula which he advocates:

℞ Pulv. cinnamon (Saigon), 2 troy oz.;
Catechu (air-dried), ½ troy oz.;
Cardamom, short, ¼ troy oz.;
Sulphuric acid, 6 troy oz.;
Alcohol and water, āā q. s. ad 2 pints.

"Bruise the cardamom, and separate the seeds from the capsules by means of a sieve. Then powder the seeds finely, and mix them with the cinnamon and eight fluidounces of alcohol. Macerate the mixture for two days, with occasional shaking; then filter, and follow with alcohol through the filter until eight fluidounces of filter are obtained. Reduce the catechu to a coarse powder, add eight fluidounces of water, and apply heat until the soluble portion is extracted, and set the solution aside for several hours. When this solution has thoroughly cooled and the catechu has crystallized out, pour the mixture into a filter and follow with water, if necessary, until six fluidounces of filtrate is obtained. Mix the sulphuric acid with one pint of alcohol by gradual addition and constant stirring, taking care to modify the temperature by appropriate means of refrigeration. To this mixture, when cooled, add the aromatic tincture, followed by the catechu solution; then set it aside for several days, and filter.—*Druggists Circular and Chem. Gazette.*

MISCELLANY.

Dr. Piffard has retired from his editorial connection with the *Journal of Cutaneous and Venereal Diseases*. The *Journal* will be continued under the sole editorial charge of Dr. P. A. Morrow. We may remind our readers that this is the only publication in the English language devoted to skin and venereal diseases, and during the three years of its existence it has won for itself a high reputation for scientific excellence as well as practical utility. In addition to presenting all that is new and valuable in these special departments, the colored lithographs and wood-engravings with which the original articles are illustrated are worth more than the price of subscription.

Ligature of the Femoral Artery under Cocaine.—Dr. Joseph W. Howe ligatured the femoral artery for popliteal aneurism, under cocaine, at St. Francis' Hospital, New York, January 27.—*The Medical Record.*

Dr. Du Claux has been appointed to the

chair of Biological Chemistry in the Faculté des Sciences.

DR. VULPIAN has resigned his position as physician in the Paris hospitals.

HARVARD MEDICAL DEPARTMENT.—Dr. W. L. Richardson has been appointed professor of obstetrics.

PERSONAL.—Dr. H. Earnest Goodman has removed to No. 1509 Walnut Street, Philadelphia.

NOTES AND QUERIES.

GRATUITOUS MEDICAL SERVICE FOR THE INDIGENT INSANE.

IN this age of progress and enlightened civilization it is a reassuring guarantee of real advancement to observe the growing tendency on the part of the more intelligent, powerful, and highly-favored classes of the community to extend the assisting hand to those less intelligent and less fortunate, whose daily hand-to-mouth struggle for subsistence is sufficiently precarious and uncertain even when bodily and mental vigor is retained. The invasions of disease, to which depressing social conditions and unsanitary surroundings render them peculiarly liable, rapidly recruit the numbers of those depending upon charity. While provision for the care and medical treatment of the indigent sick has been liberally made by the establishment of general hospitals and of free medical dispensaries for physical maladies and disorders, until very recently no effort has been made to provide gratuitous advice and medical treatment for the indigent insane. The Board of Managers of the Pennsylvania Hospital have come forward and supplied this deficiency by the establishment of such gratuitous service in the Out-Patient Department of the general hospital. It is designed to reach more particularly cases of mental disorder in their incipiency whose condition does not demand custodial care. In regard to this branch of the hospital service it is sufficient here to say that during the past few months since its commencement the applications for advice and treatment from proper cases have been sufficiently numerous to forecast a career of future usefulness.

The question will naturally arise, Does a demand really exist? is there any considerable number of cases of incipient or of threatened insanity among the poor of our community? This will be best answered from the future experience of the service already established, as it will serve to test the requirements of the public in this matter. It would seem as though the demand was most pressing, when viewed in the light of the great and ever-increasing number of requisitions for admission made upon our already overcrowded public asylums for the insane by this very class. Nor are these demands made solely upon State hospitals: the charitable capabilities of our private institutions are strained to the utmost limit in response to almost daily applications for admission of acute cases of mental disorder among the poor. Let it be granted that the large majority of these have passed the stage during which it would be possible to benefit them by dispensary treatment; that they already require custodial care. Yet the time was when their disorder was incipient, threatening, impending; and the fresh recruits to this army of unfortunates must be constantly coming in.

The offer of gratuitous relief of *incipient* insanity takes a long step in advance of the benefits extended by our hospitals in the past, meets the patient at a remote point upon his way to the institution with some reasonable hope of averting the impending danger and restoring him to a condition of health and usefulness. Too frequently their improvable period has passed by neglected, or their chance for speedy recovery has been much impaired prior to the time of hospital commitment, due in part to the absence of facilities for advice and treatment, to a failure to recognize the character of the disorder, or to a natural and popular prejudice against fixing the supposed "stigma" of insanity upon the patient by placing him in a hospital. These untoward influences would be much less likely to operate in a dispensary service, especially should the latter be connected with a general hospital and not (apparently) with an asylum. The insane will come, or their friends will bring them, to a department where the subjects for treatment in general medicine, surgery, gynæcology, ophthalmology, and mental disorders are treated gratuitously in the same or in contiguous apartments, with much less dread and hesitation than they would exhibit if invited to present themselves for treatment at an asylum. In offering such service with the hope of actually reaching this class and alleviating their morbid conditions, it is necessary to meet them upon their own ground and make proper concession to popular prejudice.

A properly-conducted free service might do much in the course of time, by preventive medical treatment, to diminish the great pressure of applications for admission upon our public institutions. Here in this district, noted for philanthropy, the public room for the care of the insane poor is inhumanly overcrowded; nor will extensions of present existing buildings suffice to abate this evil It demands, in addition to this, a new hospital, furnished with the best modern appliances for the fulfilment of its purposes, in order to begin to meet the actual requirements of the case. Even were this accomplished, in a very few years the accommodations provided would again be found insufficient. Is it not time, then, to at least attempt to apply prophylactic therapeutics and hygiene to impending insanities? It is the "ounce of prevention" which, in this instance, is worth more than any weight of alleged "cure." This service would afford an interesting study of the effect of treatment of these partially-developed pathological conditions. As the records were extended, a quite new field of clinical facts would be at the disposal of those who comparatively seldom have an opportunity of treating a case of incipient insanity, although in daily contact with its later and less hopeful manifestations.

It might not be out of place here to indicate some of the forms of mental disorder likely to present for advice at such service. Prominently first in point of frequency would be those showing that group of symptoms which picture to the mind impending melancholia. The ambitious, feverish struggle for precedence which seems to pervade all classes of the community, the absence of proper thrift, the living fully up to or beyond one's means, however small they may be, and the disappointment and embarrassment which are almost invariable accompaniments of such a mode of life, are responsible for much of the over-anxiety and mental depression found in the middle and lower classes. Grief, shame, disappointed ambition, pecuniary reverses, domestic infelicity, and the depressing effect of hard toil for a scant subsistence are some of the many exciting causes. Melancholia seems to be, at present, the most prevalent type of acute insanity. That worn-out and broken-down condition which has received the name neurasthenia would also be frequently encountered, as would insomnia in its many forms, occurring as an isolated morbid condition or as a troublesome symptom of other and graver affections. Less frequently would be met cases of mania, more or less advanced, chronic insanities, syphilis of the brain, paretic dementia, epilepsy, mental disorders of traumatic origin, those dependent upon vascular defects, upon the abuse of stimulants, the habitual use of drugs, and those the result of imperfect or arrested development.

The knowledge of the existence of such a charity should be widely diffused in order to reach those for whose relief it was founded, and the medical fraternity of our city could doubtless render valuable assistance in the cause, not alone by the general diffusion of information and the recommendation of special cases, but in the equally important task of educating the public mind to a higher level of appreciation of its duties and responsibilities towards its insane.

Should it be found in the future that free service for these disorders declined through lack of patronage, it would not indicate that insanity is not prevalent, nor that mental diseases have not distinctly recognizable initial stages, but that popular education and enlightenment would have to advance a step higher in order to appreciate the public-spirited efforts in its behalf of those who builded ahead of their time.

HENRY M. WETHERILL, JR., M.D.,
Pennsylvania Hospital for the Insane.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 17, 1886, TO JANUARY 30, 1886.

COLONEL JOHN E. SUMMERS, SURGEON.—Retired from active service, by operation of law, January 24, 1886. S. O. 20, A. G. O., January 25, 1886.

MAJOR WARREN WEBSTER, SURGEON.—Sick-leave of absence further extended nine months on account of sickness. S. O. 15, A. G. O., January 19, 1886.

MAJOR WILLIAM E. WATERS, SURGEON.—Granted leave of absence for one month and fifteen days. S. O. 5, Division of the Atlantic, January 23, 1886.

ASSISTANT-SURGEON J. M. BANISTER.—Ordered for temporary duty at Fort Warren, Massachusetts. S. O. 16, Department of the East, January 23, 1886.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, FEBRUARY 20, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE ON HEREDITARY SYPHILIS.

BY J. M. KEATING, M.D.,

Visiting Obstetrician to Philadelphia Hospital, and Lecturer on Diseases of Women and Children, etc.

Reported by WILLIAM A. EDWARDS, M.D., Medical Registrar Philadelphia Hospital; Instructor in Clinical Medicine, University of Pennsylvania.

GENTLEMEN, — The wards of the hospital are so peculiarly rich in illustrations of the interesting and important subject of hereditary syphilis that we will devote several meetings entirely to its consideration.

Syphilis is a disease that you will meet with in all walks of life,—in the homes of the rich as well as in the abodes of the poor. In some cases its symptoms are so well marked that he who runs may read; in others but irregular manifestations and ill-defined symptoms will warn you that your little patient is the subject of this most unfortunate inheritance.

By hereditary syphilis we understand syphilis which has been transmitted by either parent before the seventh month. This matter of transmissibility is one of great interest, and many theories have been advanced by different observers in attempts at elucidation; but as yet it may be considered an open question. Some authorities are of the opinion that men with tertiary syphilis may procreate non-syphilitic children; others add their quota to the argument by stating that tertiary syphilis is not any more transmissible than it is communicable in other ways.

The weight of opinion seems to support the view that, after four years of careful, conscientious specific treatment, the danger of transmission of syphilis to offspring is at the minimum, if it exist at all.

It seems also to hold good that, even if both parents are infected, but have reached the tertiary stage, the danger of transmission is small. My personal opinion is that we should be extremely careful in recommending matrimony to syphilitics. An extended practice in pædiatrics has convinced me that many cases of late syphilis are not seen by syphilographers, but by the general practitioner,—as, for example, late eruptions and scrofulous troubles. Some authorities consider many cases of scrofula as glandular syphilis. A notable and able exponent of this view was the late Professor Gross.

As we have seen above, syphilis reaches the child either through the mother or father or by direct infection, and the little being is brought into the world a subject of hereditary syphilis, ready to infect all but its mother. This is in accordance with the well-known "law of Colles," which is about as follows: "a child born of a mother who is without obvious venereal symptoms, and which, without being exposed to any infection subsequent to its birth, shows the disease when a few weeks old,—this child may infect the most healthy nurse, whether she suckle it or merely handle and dress it; and yet this child is never known to infect its own mother, even though she suckle it while it has venereal ulcers of the lips and tongue." This law seems to show that, in all probability, the mother has a latent form of syphilis which renders her incapable of receiving the disease, she having possibly contracted her disease from the fœtus from an ovum becoming impregnated by a syphilitic spermatozoid. Colles's law shows us how extremely careful we should be in allowing patients to select wet-nurses. Unless you interfere, a perfectly pure nurse may be infected with this most unfortunate disease. You will not infrequently see chancres on the nipples of wet-nurses contracted in this way.*

The mother may have received the syphilitic infection previous to conception of her child, or at its conception, or again during the period of utero-gestation. It is proper for me to state that syphilis by conception has been denied by several eminent authorities; but the great mass of clinical facts, and, indeed, the experience of this hospital, seem to show the frequent, if not the almost invariable, contamination of the mother through the fœtus. You will readily appreciate the fact that this subject of infection through the medium of the fœtus is a difficult one to pursue,—so many stumbling-blocks are

* I am not prepared as yet to claim entire allegiance to the law of Colles, nor do I believe that every woman who gives birth to a syphilitic child is of necessity syphilitic herself. Diday recognizes the fact that many women who bear children to syphilitic fathers escape contagion altogether.

met with in your investigations. It would first be essential to assure yourself that the father has no abrasions or any apparent avenue by which the virus could be conveyed to his wife; again, that the wife is not presenting some evidence of active syphilis, in some apparently trifling or unnoticed lesion. Having assured yourself of this, then there is but one means of transit from the father to the mother, and that is through the fœtus. The law of Colles would again be an argument in favor of this view. I have never, in a long service in this hospital, so peculiarly rich in syphilitic diseases, seen a chancre on the nipple of a mother who has given birth to an infected child, because the mother has probably acquired immunity by first acquiring the disease.

An interesting clinical point sometimes seen in the wards is that, when syphilis occurs during utero-gestation, the first manifestations occur at a time corresponding to that which we know intervenes between the source of ordinary contagion and the appearance of the symptoms,—*i.e.*, about the ninth or tenth week of gestation; allowing, of course, in these cases a little longer period of incubation.

In some cases it seems to be almost an undoubted fact that the father has transmitted syphilis to the child directly, without infecting the mother. Remember, also, that a woman who conceives while perfectly healthy may contract syphilis during utero-gestation and the child be born with congenital syphilis. The contagion in the mother may be as late as the seventh month of pregnancy. The month at which a fœtus will escape infection is not settled beyond peradventure. The general opinion is, however, the earlier the mother receives her infection, the less likelihood there is of the child escaping.

If both parents have syphilis, there is, of course, absolute certainty that the new being will also have it. The more recent the disease of the parents, the greater, of course, would be the chances of transmission in a grave form. The hereditary transmission of syphilis becomes less as the parents grow older. Correct treatment will also modify the transmission. That a pregnant woman or her husband is the subject of syphilitic disease is shown in many ways. Early abortions (from the first to the sixth month) are a frequent indication, due, in all possibility, to syphilitic disease of the placenta. The fœtus will generally present evidences of the disease in the palms and soles, and in visceral lesions. Many cases will present no distinctive lesion. Almost all of these syphilitic products will be macerated and of a purplish, congested color, with the skin detached or detachable. An eminent authority states that at least one-third of the syphilitic children are dead-born. A syphilitic babe will manifest its diathesis at variable periods after birth, rarely later than the third month.

The first symptom will probably be "snuffles," which will greatly interfere with nursing. This is due to inflammation of the mucous membrane, and may even extend to ulceration of the Schneiderian membrane, eventually involving bone and cartilage. The child will generally have a harsh, disagreeable cry, such as you have heard in these babies. This is due to an inflammation of the mucous membrane of the larynx, and is very characteristic. You will occasionally meet babes who present syphilitic pemphigus of the palmar surfaces. This at one time was considered by many observers as not diagnostic or characteristic of the syphilitic taint, but now almost all observers agree in relegating pemphigus to a prominent place in the chain of evidence going to make up the diagnosis of hereditary syphilis. It is not necessary that these children should be senile-looking. Last year I showed to the class an infant suffering from gummatous growths who was fat, plump, and apparently well nourished. The rapidity of the emaciation is usually in proportion to the amount of poison transmitted.

Erythema, roseola, and papular eruptions will now manifest themselves, as there is present a condition of general hyperæmia with papillary infiltration.

Erythema, sometimes called roseola, will generally present itself about the third week after birth, and is most apt to commence on the belly in irregular spots or patches, red in color, and disappearing on pressure. The eruption will extend to the trunk and limbs, and become darker in color. The eruption may be excoriated, or, if not, at least moist, due to the thin epidermis at this period of life. You may also meet it confluent.

Do not mistake this eruption for the simple non-specific erythema of infancy. The syphilitic roseola is liable to become

scaly on the palms and soles. Another manifestation of absolute diagnostic aid is the mucous patch and the papular eruption, the former occurring on the tongue, lips, and cheeks, and at the angle of the mouth at the muco-cutaneous junction.

The papules will be the larger and more marked at those situations at which there is the most heat and moisture, as in the groin, flexures of the joints, and the genital organs. When these papules are thus kept warm, soft, and moist, they may present a fetid discharge and look not unlike condylomata.

The mucous patches, however, will claim most of your attention. They are rarely absent in these cases, and are usually the mode of conveyance of the poison from the syphilitic babe to the non-infected nurse, or, in fact, to any one who comes in close or intimate contact with the little patient. In appearance they do not differ much from the same lesion in the adult, which you have so often seen in this hospital, except perhaps that they are apt sooner to lose the surface epithelium.

You will generally note them as irregularly red, depressed spots, either distinct and separate or running one into the other, sometimes ulcerated, and covered with a false membrane.

Their point of selection is interesting, being generally, as above stated, the angles of the mouth, dorsum, or border of the tongue,—points which you know are rarely affected by non-specific stomatitis, the latter generally occurring in the gums or in the depression between the gums and the cheeks, which, in turn, are points rarely invaded by mucous patches.

This little patient's back will well illustrate the ravages of pustular syphilide, an eruption which appears in the secondary period, usually at or about the sixth week. In these cases the papules are metamorphosed into pustules. The transformation is slow and sluggish, and your patient is apt to present the two eruptions, papular and pustular, with transitional stages between the two. These pustules will leave behind ulcerated surfaces, and eventually form a permanent cicatrix.

Furuncles may or may not occur. They are of doubtful diagnostic value.

This, gentlemen, shows you the picture of a syphilitic child from birth up to the end of about the first year, at which point we will leave it until our next meeting.

ORIGINAL COMMUNICATIONS.

A CASE OF DIFFICULT DIAGNOSIS.

BY HUGO ENGEL, A.M., M.D.,
Professor of Nervous Diseases and Clinical Medicine in the Medico-Chirurgical College of Philadelphia.

MEDICAL science and art are really making astonishing progress, and especially is this true with reference to medical diagnosis. The physician no longer relies only upon verbal inquiry or the visible symptoms, or the result of his examination of the conditions of the patient's pulse and tongue, but he employs exact methods and instruments of precision, and the information thus obtained cannot deceive the trained observer.

The truth to-day is well recognized that in many cases an exact diagnosis is impossible without the employment of modern means of investigation,—the thermometer, ophthalmoscope, electrical apparatus, dynamometer, æsthesiometer, stethoscope, and other means of precision. With such assistance, one might think it impossible for any disease, no matter how obscure, to escape detection, but this is by no means invariably the case. While we admit that a competent physician but rarely meets with a case the pathology of which he would not understand after a thorough examination, at times cases of a well-known disease escape recognition during life. Some maladies which medical science has thoroughly investigated, and with which a trained diagnostician ought to be so familiar that he should at once detect them, occasionally appear under such peculiar circumstances, and are attended by such conflicting symptoms, that it is almost impossible to determine their nature at the time.

While I do not doubt that during a professional career of about twenty years I have committed many a diagnostic error, yet three times have I failed to recognize one and the same disease, which, strange to say, each time was presented in a similar manner. The first two cases happened early in my professional life,—so early that I had completely forgotten them, and that only their description in my records brought them back to my memory; but the third came under my observation only a few months ago, and it was a surprise to me, on looking over my records, to find that seventeen years before I had attended two similar cases within one year.

The case is so instructive, and its publication might lead to the avoidance of so many errors, that I have concluded to report it; for it has always been my opinion that we would learn more from the publication of our mistakes than from the recording of rare cases. The history of the case in question is as follows:

P. B. C., æt. 50, first came to my office August 6 of last year, and he then gave me the following history of himself and family. When he was but seven years old his father and mother both died within one week of each other with typhus, then epidemic in the Prussian barracks, where his father was stationed. Of his childhood he can only say that he never suffered from any disease that he is aware of. Later, he continued in the best health until about one year ago, when he had some fever, headache, and a papular eruption, which symptoms, however, all ceased within three or four days.

When I first saw him he appeared to be a robust man of compact build. He came to consult me about difficulty of breathing, which, as he said, had commenced one month previously. When he awoke one morning he had had a dry, barking cough, with pain and soreness beneath the sternum, which he attributed to a cold. He consulted a physician, who told him that he was suffering with bronchitis. The complaint was not serious enough to prevent him from attending to his business, which was that of an upholsterer, he being the owner of a large furniture establishment. Notwithstanding treatment, the cough did not seem to improve; but at the end of the first week difficulty of breathing was added, and this remained more or less stationary, and always became worse at night. He then also noticed that he had to pass water frequently, and in large quantities, while his bowels evinced a strong tendency to constipation, something very unusual with him. He also had great difficulty in falling asleep: a peculiar restlessness seemed to overcome him at night, which, in conjunction with the dyspnœa and the frequent micturition, probably caused his wakefulness. When the dyspnœa was most severe it assumed the character of asthma, the wheezing within his chest being perceived by all present in the room. The disturbance in the secretion of urine commenced immediately after he had taken the first dose of a medicine which his first physician had given him for the relief of his cough.

At his first visit I noticed a papular eruption in his face, and found that the same exanthem, though more isolated, extended all over the body. The papules were moderately red, small, and very hard; at many places, mainly on the abdomen and back, they had given rise to bleeding in consequence of the scratching, for the itching at times became intolerable, especially towards night. This was the same skin-disease as that which had attacked him the year before, but it had then yielded to treatment or disappeared by itself within three or four days.

There was a peculiar restlessness about Mr. C. It seemed difficult for him to sit still. When asked about it he replied that he felt "a something" in his legs which forced him to change their position every few seconds. Though the appearance of the patient was that of a robust man, the skin of his face had a spotted look; a bluish discoloration here and there indicated some obstruction in the circulation, or a want of sufficient aeration of the blood. On inquiry, Mr. C. also informed me that four weeks ago, just before the beginning of his illness, he had had occasion to get himself weighed, when he found his weight to be exactly two hundred and thirty-two pounds. A few days before he came to me he noticed that his clothing was becoming too wide for him, and, anxious to know whether he had really lost so much flesh, he again weighed himself, when to his surprise he discovered that he had lost forty-two pounds. Being only five feet nine inches tall, the one hundred and ninety pounds remaining made him still appear a stout man.

Having obtained the above information, I proceeded to a physical examination. Percussion all over the chest revealed a clear sound, while on auscultation many sibilant and large and small moist râles were heard over both lungs. These râles were about evenly distributed; the respiratory murmur was not clear, there being more of the bronchial element in it, and expiration, though faint, appeared slightly prolonged. A very important result was obtained from respiratory percussion, although to my regret I did not attach that significance to it which later events warranted. Everywhere over the lungs and slightly more over the apices the clearness of the percussion-note seemed to me to become impaired on letting the patient take a deep breath and hold it while I percussed. The deeper the inspiration and the longer the air was retained within the chest, the more the sound appeared to me to lose its clear resonance, though it at no time became positively dull.

Spleen and liver were somewhat enlarged; the tongue, slightly coated, evinced a tendency to dryness; the pupils were contracted, but reacted well; and the skin was deprived of its normal moisture. The heart was normal, but the impulse slightly weak and the action rapid; temperature 99° (2 P.M.); number of respirations 32. The examination of the urine gave a negative result.

As the patient seemed to suffer mainly from the cough and the dyspnœa,—the latter becoming worse on the least attempt at motion,—I prescribed the following mixture:

℞ Antimon. et potass. tart., gr. ij ;
Liq. ammonii acetatis, f℥ij ;
Spirit. æther. nitrosi, f℥ij ;
Syrup. pruni Virgin., q. s. ad f℥vj. M.

S.—A teaspoonful in water every two hours.

I also ordered,—

℞ Pulver. Doveri, gr. x ;
Quininæ bisulphatis, gr. v.
M. Ft. pulvis. S.—At night.

I also told him to have as many dry cups as possible applied all over his chest, and to take a moderate dose of Glauber's salt one hour before breakfast,—just enough to keep his bowels open,—and regulated his diet.

Four days later the patient again called on me, and from the manner of his breathing I at once saw that a great improvement had occurred, which did not surprise me, as I had often known a bronchitis to disappear within a few days under the use of tartar emetic and dry cups. The patient acknowledged that he felt a great deal better, that the dyspnœa had completely ceased, and that he slept as well as ever. When I advised him to continue the medicine in a diminished dose and at longer intervals, and to see me again in three or four days, he seemed astonished, having evidently believed that he could dispense with the professional services of a physician.

He did not visit me again until a week afterwards, when I noticed a great change in him. He looked paler and thinner, and seemed much weaker. He said that he now regretted not having obeyed directions, but that he had been feeling well until the day previous, when a short cough commenced to trouble him and some of the dyspnœa returned. But what he most complained of was a diarrhœa, which had set in a day earlier. He had had only from three to four fluid passages during each twenty-four hours, but, what was remarkable about them, they left him very weak, and since the first movement of the kind he felt a peculiar debility in his lower limbs, especially from the knees downward. The frequent desire to urinate had also returned, and the quantity of the urine excreted again augmented.

There was no change in the physical condition of his chest, as revealed by percussion and auscultation. The same râles, only less numerous, as heard at first, were still perceived. An examination of the urethra proved the absence of all morbid conditions there. I instructed him to measure the exact quantity of urine passed during twenty-four hours, and to bring me a specimen of it. For the diarrhœa I gave him twenty grains of subnitrate of bismuth, with one-sixth of a grain of morphia, half a grain of bicarbonate of sodium, and one grain of aromatic powder, to be taken once every five hours. As soon as the diarrhœa should have ceased he was to resume the tartar-emetic mixture.

Four days later he again called on me. The dyspnœa had once more subsided, and the diarrhœa decreased to one fluid stool daily, but the latter always left him very weak. In other respects Mr. C. had not improved. He was evidently losing flesh rapidly. He reported the quantity of urine passed during twenty-four hours to have been three quarts and a few ounces, and its chemical examination revealed a trace of sugar. I sent a specimen of it to Mr. Louis Koch, a very reliable apothecary and most excellent chemist. He also found a trace of sugar, but no other foreign substance, in the urine.

I prescribed half a fluidrachm of ergot to be taken three times a day, and one-eighth of a grain of morphia in the morning and at night. Under this treatment the amount of urine secreted gradually diminished to three and a half pints daily, and the sugar disappeared in the urine. But otherwise, while the dyspnœa greatly improved, the diarrhœa continued, the patient having from two to three loose discharges daily, and each of them left him weaker. As I had found this condition,—a diarrhœa in which the discharges are fluid, but very small in quantity, which seems to be uninfluenced by the usual treatment, and which causes in the patient a feeling of great weakness utterly out of proportion to the small quantity of fæces discharged,—especially if associated with an increasing debility in the lower limbs, and if accompanied by rapid loss of flesh, only in phthisical patients suffering from tubercular ulceration of the bowels, I once more made a most careful physical examination. The percussion-resonance was normal all over the chest, but its diminished clearness on respiratory percussion—a diagnostic test which we owe to Professor Da Costa—seemed to me now more apparent than at first. Auscultation revealed many small moist râles, but no crackling anywhere. Spleen and liver also were more enlarged.

It was now that the idea first occurred to me that the patient might be suffering from miliary tuberculosis ; and, as I had found the fluid extract of coto, in doses of twenty drops administered every three or four hours, the only reliable remedy to put a stop to the diarrhœa in tubercular ulceration of the intestines, or at least to influence it, while in the fluid alvine discharges due to some other morbid lesion it had proved useless, I concluded to employ this remedy as a test. As the patient's pupils were rather contracted, I also prescribed a solution of atropine, told him how to drop it into his eye, and requested him to call again in four days for an ophthalmoscopical examination, my desire being to see whether I might not there find an evidence of the tubercular disease. I further gave him my thermometer and instructed him in its use, so that he might keep a record of his temperature.

Two days later (the patient resided in a suburb of Philadelphia) he sent his daughter to me to report his condition, as requested. She said that his diarrhœa had ceased, and that, though still very weak, he was apparently improving. His temperature-record had meanwhile been as follows:

August 28, 1885, 7 P.M., 100°.
" 29, 1885, 7 A.M., 99°.
" 29, 1885, 7 P.M., 100.1°.
" 30, 1885, 7 A.M., 98.4°.

I now felt sure of finding the proof of tuberculosis on my examination of his eyes, but that was destined never to be made. The following morning, at 6 A.M., I received a despatch at once to come to Mr. C., who was dying. When I arrived at his house, two hours later, he was in a comatose condition, the attack having occurred a little after five the same morning. About forty-eight hours later the patient died, evidently under the symptoms of gradual compression of the brain, probably due to serous effusion. There was no urine excreted during the last two days, the bladder being empty. The dyspnœa was great, and ultimately assumed the character of Cheyne-Stokes respiration. The temperature during this time vacillated between 99½° and 101°; but an hour before death, when the pupils, which in consequence of the mydriatic had at first been dilated, and later, after its discontinuance, had become contracted, were widely dilated, the thermometer recorded 97.3°, and the pulse was very irregular. During the whole agony there was a great accumulation of mucus in the chest, which, in consequence of the gradually increasing paralysis, the patient could not expectorate. This long-continuance of the "death-rattle" made the scene at the death-bed a very sad one.

I received permission only to open the chest. Millions of miliary tubercles were strewn all over both lungs, and they were especially numerous at the apices, thus explaining the result of respiratory percussion. The heart was flabby, but otherwise normal; so also were the large blood-vessels. As I had solemnly promised not to push my investigations further, I can only tell the condition of the liver, which was swollen and of very dark hue.

After the patient's death I obtained some information which caused me to believe that C. for many years had been suffering from diabetes mellitus, though in a very mild form and one that only at long intervals presented the more characteristic symptoms of the malady. His family had noticed at times a very peculiar odor from his urine, somewhat sweetish, which reminded one of new-mown hay: it was so strong "that the whole room retained the scent," said his wife, who had also remarked that at these times her husband passed unusually large quantities of water. The peculiar papular eruption so often met with in diabetes, and of which the patient had complained a year previous to his death and at the time of his last illness, would also tend to confirm the view taken.

The malady, however, causing his death was miliary tuberculosis; but it presented a picture which might well cause an error in diagnosis. First, it is rare that the disease attacks a man of apparently robust health at the age of Mr. C., or that it runs so rapid a course while the individual attacked is still able to move about, and indeed only seeks his bed two days before death. Then these very acute cases show, almost invariably, a different temperature-record. It generally is very high, from 104° to 105° Fahr., and usually assumes an intermittent type, while the symptoms are apt to simulate those of typhoid fever.

When the patient first came to me there was no proof of the existence of diabetes, for, though the examination of the urine was carefully made and the test the same as that applied later, no excess of sugar was found, and the quantity secreted was not augmented. There was at the start nothing to warrant any other diagnosis than that of bronchitis accompanied by dyspnœa, a form of inflammation of the bronchial tubes frequently met with in stout persons in whom the love of good things has gradually brought about a flabby or fatty-degenerated heart. The physical examination confirmed this diagnosis, and the result of treatment did so still more.

There really were but two or three symptoms, which, had they at once received their correct interpretation, should have cleared up the case: (1) the change on respiratory percussion, (2) the rapid loss of flesh, and (3) the nature of the diarrhœa.

Respiratory percussion, though easily enough performed, is difficult to interpret. Generally the diminution in clearness is by no means very marked; and should it not be at once recognized,—*i.e.*, at the first or second attempt,—the examination had best be postponed to the next visit, for on repeated tapping the ear is apt to become accustomed to the sound and can no longer distinguish fine differences. I

am convinced that any deposit sufficient to diminish the elasticity of the air-cells, without being enough to encroach seriously upon their interior so as to give rise to marked dulness in consequence of the absence of air, has the effect of altering normal resonance on respiratory percussion. The latter is therefore a valuable diagnostic aid, provided we succeed in interpreting its result correctly.

The rapid loss of flesh might have been explained by the diabetes, for, as the fatal end approaches, patients suffering from this disease usually lose weight rapidly. But in C.'s case there was no symptom indicating the near approach of death until a few days before his end. But whenever a person with apparently only a bronchial affection continues to lose decidedly in weight, we ought always to be suspicious of a grave cachexia.

The one sign, however, which, no matter how doubtful the result of the physical examination, invariably proved to me the existence of a tubercular diathesis, and which in this case also first caused my thoughts to turn in the direction of phthisis, was the peculiar diarrhœa. The patient usually has at the beginning only three or four stools a day; though fluid, they are sometimes exceedingly small and never large in quantity, but the desire for evacuation sets in so suddenly that the patient scarcely has time to reach the water-closet. Most characteristic, however, of this diarrhœa is the great debility which the patient feels immediately after evacuation. This weakness usually attacks his lower legs, and stands in no relation whatever to the quantity of the alvine discharges. A diarrhœa with exactly the same peculiarities I have never met with unless it was due to tubercular ulceration of the bowels. I do not wish to be understood as saying that this lesion is always accompanied by such diarrhœa; but what I contend is, that this diarrhœa, when present, is pathognomonic of the disease. Another important point distinguishing the diarrhœa from other fluid intestinal discharges is the fact of its being uninfluenced by any of the usual remedies,—neither opium nor its alkaloids nor astringents having any effect either upon the frequency or the character of the evacuations. The only drug that may be said to often at once ameliorate this symptom is the fluid extract of coto, as mentioned in the beginning of this article.

Regarding the weakness attending this diarrhœa, special stress must be laid upon its occurrence immediately after the alvine discharge, for though naturally the patient is not strong, he always specially feels the debility at the time mentioned.

The description of the case of C. will convince any physician of the difficulties which prevented an immediate correct diagnosis; and, while drawing the attention to the errors to be avoided, it also indicates the points which, if rightly interpreted, enable us, even under such adverse circumstances, to recognize the real malady. The case also reminds us of the fact that we cannot always rely upon the apparent success of any treatment.

507 Franklin Street, Philadelphia.

NOTES ON RECENT PROGRESS IN PHYSIOLOGY AND PATHOLOGY IN PARIS.

(Continued from page 348.)

M. PASTEUR'S METHOD OF PROPHYLAXIS AGAINST HYDROPHOBIA.

M. PASTEUR, at a recent meeting of the Académie des Sciences, stated that, after innumerable experiments, he had arrived at a prophylactic method which rendered animals exempt from rabies,—one so prompt and practical that he does not hesitate to apply it to animals in general, the human race included. A rabbit, after trephining, is inoculated under the dura mater from the spinal marrow of a rabid dog; the rabbit becomes rabid after fifteen days' incubation. A second rabbit is inoculated from the first, a third from the second, and so on through a successive series. A tendency to present a shorter time of incubation is soon exhibited. After twenty or twenty-five successive inoculations, the period of incubation is reduced to eight days, which continues through a further successive series of twenty inoculations, and the incubation-period is then reduced to seven days, which continues through a further series up to the ninetieth inoculation. M. Pasteur has arrived at this number of successive inoculations, and there is a very slight tendency to exhibit an incubation-period of less than seven days.

These experiments were begun in 1882, and have been carried on during three years without the series having been once interrupted or any virus used that was not

taken from a successive series of rabbits dead from rabies: thus it was always pure and possessed identical properties. This, says M. Pasteur, is the *nœud pratique*, the secret, of the method. The spinal cords of these rabbits are rabid throughout. If a small fragment be detached from these cords and suspended in dry air, the virulence gradually disappears. The length of time necessary for its final disappearance depends on the thickness of the fragment and the surrounding temperature: the lower the temperature, the longer the virulence lasts. When the rabid spinal marrow is placed in carbonic acid gas, the virulence lasts during several months, always provided it is preserved from contact with foreign microbes.

In order to render a dog refractory to rabies in a comparatively short time, M. Pasteur adopts the following method. A series of bottles containing dry air are made ready by placing in each a piece of potash. Every day a fragment of a spinal marrow from a rabbit recently dead from rabies, after seven days' incubation, is placed in one of these bottles; every day a dog is inoculated under the skin with a Pravaz syringe full of sterilized broth, in which a fragment of one of these dried cords is mixed. The first inoculation is made with a fragment prepared several days before the inoculation is made, in order to be sure that it has lost its virulence. The following inoculations are made with preparations more recently prepared. The last used is of one or two days' date. The dog thus treated is incapable of contracting rabies.

M. Pasteur had arrived at this stage of his experiments when a child was brought to his laboratory badly bitten by a mad dog. Sixty hours afterwards he was inoculated under the skin of the right side with a Pravaz syringe half full of marrow removed from a rabid rabbit, which had been exposed to dry air during fifteen days. On the succeeding days the inoculations were made in the following order:

July 7	9 A.M.	Marrow of	14 days.
" 7	6 P.M.	" "	12 "
" 8	9 A.M.	" "	11 "
" 8	6 P.M.	" "	9 "
" 9	11 A.M.	" "	8 "
" 10	"	" "	7 "
" 11	"	" "	6 "
" 12	"	" "	5 "
" 13	"	" "	4 "
" 14	"	" "	3 "
July 15	11 A.M.	Marrow of	2 days.
" 16	"	" "	1 day.

Thirteen inoculations were made, the treatment lasting ten days. Joseph Meister, the child in question, is in perfect health at the present time.

M. Pasteur does not believe that the progressive attenuation of the virus of the spinal cords exposed to dry air results from the contact with this air: he believes it to be more probable that the microbes the cause of rabies produce during their artificial cultivation a substance hostile to their own development. Data already in existence concerning the *modus vivendi* of these organisms support this hypothesis. M. Pasteur at a future period will publish further details. He urges that an establishment should be organized where rabbits might always be kept inoculated with the disease. A never-failing supply of spinal cords of both old and recent inoculation would thus be furnished.

M. Pasteur was present at a recent meeting of the Conseil d'Hygiène, when M. Léon Colon, in the name of the Council, made a short eulogistic speech, which M. Pasteur acknowledged. He stated that, since Meister was treated, every day people bitten by mad dogs had appeared at his laboratory to be treated in the same way. M. Pasteur considers that an establishment for the sole treatment of hydrophobia is indispensable. The expense would not be great, but his system must be further tested, in order that a number of successfully-treated cases may warrant the organization of such an establishment. M. Dujardin-Beaumetz said he had noted sixteen cases of hydrophobia since last January. The last death was caused by a dog which had previously bitten four other people. M. Brouardel asked if inoculations made a month or six weeks after the bite had been inflicted would be efficacious. M. Pasteur said he believed he could answer in the affirmative, although he had not absolute experimental proof. He had just received a telegram from Algiers, telling him that three children had been bitten by a mad dog; one died on November 5. He was asked if he would treat the two others: he had replied in the affirmative. M. Pasteur hopes to save both of the remaining children; but, if one dies, it will be easy to determine which virus is the cause of death. In rabbits, hydrophobia occurs on the fif-

teenth day when the inoculation is made with the virus of a mad dog; on the seventh, when with the virus of preventive inoculation. M. Pasteur has sixty people under treatment for bites from mad dogs, who have come from all parts of the world since he made his remarkable communication to the Académie des Sciences. We are authorized to state that M. Pasteur will receive for treatment all people who have unfortunately been bitten by a mad dog.

M. Pasteur has forwarded a letter of thanks to the Municipal Council of Havre for one thousand francs forwarded to pay a part of the expenses involved by his researches on hydrophobia. He informed the Council that he intended to devote it to paying the expenses of indigent poor who require treatment after having been bitten.

Dr. Tachard, of Columbia, contributes to the last number (November 8) of the *Union Médicale* the history of a case of hydrophobia especially interesting at the present moment, when the whole scientific world in France and other countries is following with intense interest the result of M. Pasteur's inoculations. Dr. Tachard was called in to treat a young man, 25 years of age, living in Columbia, who complained of a spreading pain in the right arm, which he believed was owing to overexertion at the gymnasium. The pain increased, and he was unable to swallow any fluid: he was horrified at the proposal of plunging his hands into cold water. After a searching inquiry, Dr. Tachard learned that eighteen months ago the patient had been slightly bitten on the right hand. Dr. Tachard immediately communicated with M. Pasteur, who regretted that he was powerless to relieve the sufferer. He said "he could save, but not cure."

ALCOHOLISM IN ITS MEDICAL AND LEGAL ASPECTS.

The question of alcoholism in all its bearings is second only in interest at the present moment to the one of hydrophobia. It evidently has not the same scientific interest, and could not offer a field of research to a Pasteur; but its chemical and medical aspects are of great social importance, and have attracted the attention of a great many of the leading men. Dr. Lunier, the distinguished authority for mental diseases and indefatigable hygienist, for fifteen years carried on warfare against the growing tendency to alcoholism in France. A few weeks before his death he published an interesting memoir on the subject of vintage and public health. He discussed the subject at a meeting of the Académie de Médecine, and stated that wines from the south of France can neither be kept nor imported unless alcohol be added to them: if the proportion do not exceed three per cent. there is not any danger to public health. The strength of the alcohol must be limited to twelve degrees. Moreover, it is important that the alcohol should be added when the wine is in vats, before the second fermentation takes place. If this precaution be not observed, the result will be a simple mixture instead of an alcoholic wine,—an alcohol weakened by the presence of wine, and very injurious to the health. It is imperative that vinous alcohol be used. Manufactured alcohol, extracted from beet-root or potatoes, especially if added to wine in casks, is excessively injurious.

M. Girard, the *chef* at the Paris Municipal Laboratory, read, at a recent meeting of the Société de Médecine publique et d'Hygiène, a note on the falsification of alcohol and the necessity of instituting a strict investigation concerning the influence of falsified alcohol on the increase of insanity. Alcohols have toxic properties, which increase with their atomic weight. Brandy would be dangerous if it contained alcohol belonging to a higher series than ethylic alcohol. Brandy, cognac, etc., are manufactured: the aroma is given to them by using an article of German manufacture, which is considered injurious to health. The essential oil of lees of wine is obtained from Germany, and is invariably used in manufactured alcohols.

M. Moltet, a well-known physician whose specialty is mental diseases, has read a most interesting paper before the Académie de Médecine on the responsibility of criminal drunkards. Crimes, murders, etc., committed when the perpetrators are under the influence of alcohol are much on the increase in France. Alcoholism at the present time presents unusual characteristics. M. Moltet believes that MM. Dujardin-Beaumetz's and Audige's researches explain this. Manufactured spirits currently sold are more toxic than pure vinous alcohols: they contain empyreumatic sub-

stances which exercise a most dangerous influence on the nervous system. This is manifested by sudden fits of frenzy and savage, brutal impulses. Magistrates are at a loss how to judge a criminal who suddenly commits a crime without any reason or previous intention. If there had been previously momentary delirium from a cerebral lesion of alcoholic origin, the medical expert's evidence would give some clue; but after the momentary influence of these manufactured spirits has passed away the drunkard is in a normal condition, and no symptom can be detected suggesting the probability of a return of mad impulses. M. Moltet cited a curious instance of the questionable responsibility of a murderer. An Italian, who always worked in compressed air and was of excessively sober habits, allowed himself to be overpersuaded by his companions and drank large quantities of alcoholic liquor. About twelve o'clock at night he was alone in the streets, trying to find his home, when suddenly, without the slightest provocation, he drew his knife and stabbed several people at the corner of a street. One among them died from the wounds inflicted by the Italian. The murderer was with difficulty captured. As soon as he reached the station-house he fell into a profound sleep. The next morning, when questioned, he did not deny the crime imputed to him, but said, if true, he had no idea how it happened. Working in compressed air induces neuralgia, nervous disturbance, and in some cases produces a general cerebral condition which increases alcoholic susceptibility. The jury disregarded these considerations, but the final judgment took them into consideration, and a less severe sentence was passed than would have been otherwise given.

Still more recently, M. Lancereaux, professor agrégé at the Paris Medical Faculty and hospital physician, read statistics concerning alcoholism before the Académie de Médecine, which he had collected in hospitals in the interval from 1860 to 1875, a period of fifteen years. They show that the patients addicted to excessive drinking admitted into hospitals are mostly people from the provinces, where pure brandy is largely consumed. M. Lancereaux classes alcoholic drinks under three headings: cider and beer; wine and wine-brandy; brandy extracted from cereals, potatoes, and liquors made from different extracted principles. Cider, according to M. Lancereaux, is a healthy drink: even when it is indulged in to excess, it produces only transitory intoxication, free from any pathological sequelæ. The consumption of beer is greatly on the increase, and M. Lancereaux says that this is not to be regretted. Beer is not an unhealthy drink: it encourages obesity and slight gastric disturbance, but does not produce any more serious troubles. Wine contains more alcohol and produces various ill effects: there is rapid stimulation of the nervous system, and the excess absorbed determines organic lesions of the nerve-centres and liver. Alcoholism resulting from over-indulgence in wine, according to M. Lancereaux, is favorable to the development of tuberculous meningitis. He has had several opportunities of observing this disease in very young children to whom wine was habitually given. Children of vinous drunkards do not inherit the vice, but this misfortune overtakes children whose parents indulge in drinks manufactured from cereals and potatoes. These drinks determine cerebral and vasomotor disturbance, and impair the intellectual faculties; succeeding generations degenerate, and acute diseases under such circumstances become intensified. Liquors manufactured with these alcohols and different essences determine similar conditions, and especially an exaggerated excitability of the sole of the foot and on each side of the body where the nerves emerge. The descendants of these drunkards have an unconquerable craving for alcohol; they are frequently idiots, and after the second or third generation they become shorter in stature. Rigorous investigations made in France and Switzerland, where these manufactured alcoholic drinks are most largely consumed, demonstrate the accuracy of these details. M. Lancereaux said that the government will be guilty of a grave fault if it does not legislate for the present state of things with regard to alcoholism. In a country where manhood suffrage exists, the enforcement of regulations to prevent alcoholism is always neglected. M. Lancereaux suggests that all drinks that are harmless or only slightly dangerous should be allowed to be sold without restraint, provided they are not falsified and are of good quality. Under this class he includes cider, wine, and beer. He also suggests that the manu-

facture of cognac from cereals, beet-root, and potatoes should be under strict superintendence; that rewards should be given for the discovery of means of improving these liquors, either by removing from them injurious substances or by transforming them into others less dangerous and thus rendering their effects similar to those of vinous alcohols. He also desires that brandy should be burdened by a heavy tax, according to the place where it is sold; that the sale of this drink should be limited; that the sellers should be liable to severe rules and penalties; and that only those who are well known for their good conduct should be granted a license. All responsible drunkards, according to M. Lancereaux's code, should be punished. Houses of refuge should be provided for those who cannot control their habits.

Dr. Oettingen, who was formerly Dr. Lancereaux's house-surgeon, has chosen for the subject of his doctoral thesis "Alcoholic Paralysis." This form of paralysis, according to Dr. Oettingen, is not of central origin, but peripheral, and results from diffused neuritis. Alcoholic paralysis is always preceded by a series of symptoms clearly indicative of alcoholism, and it is accompanied almost always by phenomena special to this form of paralysis: namely, acute pain in the limbs, pricking sensations, and paresis, which is most intense on waking, and is generally the forerunner of paralysis. The extensor muscles of the toes are paralyzed first, and the foot resembles a case of talipes. This form of paralysis sometimes steals on slowly, at other times rapidly, and becomes generalized. Facial paralysis never occurs, and deglutition is rarely affected. The bladder and intestines preserve their normal condition; neither is there paralysis of the muscles of the eye. Clinically speaking, there are three different forms. The first consists of paresis easily cured; the second is chronic paralysis, and may continue for months and years; the third progresses rapidly, and is generally fatal after a few months. The general health becomes seriously deteriorated, the tongue is dry, incurable diarrhœa sets in with frequent sickness, and eschars appear on the sacrum. Generally, muscular atrophy accompanies alcoholic paralysis; but other trophic and vaso-motor disturbances have been observed. The pain is best combated by electricity.

THE ETIOLOGY OF PULMONARY TUBERCULOSIS.

M. Thaon, of Nice, at a recent meeting of the Paris Biological Society, read a paper on the initial lesions of pulmonary tuberculosis. The author has examined a considerable number of pathological specimens taken from different animals which had died from experimental subacute tuberculosis or chronic tuberculosis according to the will of the experimenter. Guinea-pigs fed morning and evening on tuberculous sputa, powdered and mixed with sterilized water, invariably died on the twelfth or fourteenth day. The lungs were a solid, compact mass of a reddish-brown color, covered with yellow spots. On a histological examination, it was observed that the tissues presented small separated areas of lobular pneumonia, measuring about one-third of a millimetre. Treated with picro-carmine they became colored a deep red. They consisted of closely-packed cells undergoing proliferation free from degeneration, and were lodged in the beginning of branching bronchial tubes. Similar lesions were observed in the pulmonary alveoli; and these miliary masses were also grouped round the pulmonary vessels. Bacilli were present in considerable numbers in the areas of miliary pneumonia; in those of catarrhal pneumonia they were less abundant. Bacilli could be observed migrating from the bronchi into the alveoli. There they provoked proliferation of the pulmonary epithelium and its subsequent degeneration. Giant-cells, zones of epithelial cells, which formerly were recognized as the characteristics of tuberculous generations, also the various fibrous transformation special to pulmonary phthisis, were only observed in organs far advanced in tuberculosis. The bacillus, M. Thaon says, is the agent which produces all these changes. It is seen in the centre of the cellular elements in the giant-cells, and does not disappear until the caseous masses become one uniform vitreous mass.

At a subsequent meeting M. Thaon showed a series of illustrations of the lesions characteristic of infectious diphtheritic broncho-pneumonia, of measles, and whooping-cough. It was evident that the effusions consisted solely of microbes in pus-cells and in large degenerated pulmonary cells. M. Thaon found in the lungs the two varieties of microbes described by

Loefler in diphtheritis, zooglœa and bacilli, but disagrees with Herr Loefler in considering the bacilli the important factors. The zooglœa are present from the onset of the lesions; the bacilli appear later on at the extremity of the bronchi in areas of long-standing lesion. The broncho-pneumonia of measles and whooping-cough is different from that of diphtheria. At the onset small isolated nodules appear. They are as fine as tubercular granulations, and are formed by acinous pneumonia and round elements. They resemble leucocytes pressed one against the other. Treated with carmine they take a deep-red coloration. If these nodules be examined, it will be seen that the intra-alveolar cells are filled with round microbes at the diplococcus stage, and with chains consisting of three, five, and seven seed-like bodies. These microbes are larger than those of the zooglœa of diphtheritis. The alveolar cells which contain them assume a vitreous aspect as soon as the microbes exceed a certain number. Besides these round parasites, layers of bacilli of a uniform length are observed on the surface of the different bronchi and in those alveoli which are in an advanced pathological condition.

BRONCHO-PNEUMONIA IN THE COURSE OF INFECTIOUS DISEASES.

M. Thaon eloquently urged that hospitals for children's infectious diseases should be built. Measles and whooping-cough increase the mortality in hospitals to a considerable degree, whereas in private houses, where the patients are not in contact with air impregnated with microbes, they are relatively harmless. The isolated pavilions organized in 1882 have not been sufficiently effective. The mortality in them is five in six, and broncho-pneumonia always precedes death,—that is to say, all the fatal cases were due to this complication.

M. Darier published last March his doctoral thesis on "Broncho-Pneumonia in Diphtheritis," and at one of the last meetings of the Biological Society he communicated the results of his subsequent researches on that subject. The micrococci which he described in his thesis under two aspects—as round bodies grouped together like diplococci, also often in long, sinuous chains, and sometimes arranged in closely-packed groups and cloudy masses—have been observed by Dr. Darier to indicate by these different dispositions micro-organisms of different species. This author, by artificial cultivation, has succeeded in isolating four different species of micro-organisms. Evidently, minute care was necessary in order to avoid the presence of bacilli of putrefaction. The species isolated by M. Darier were the staphylococcus pyogenis aureus, the staphylococcus albus (or a micro-organism which closely resembles it), the streptococcus pyogenis, and, finally, the bacillus of diphtheria. This latter he met with nine times out of thirteen. The first three species are easily cultivated in veal-broth, by gelatin, or agar-agar is added. The last species named is only cultivated on gelatinized serum.

M. Darier concludes, from the results of this series of carefully-made experiments with these isolated micro-organisms (staphylococcus aureus albus and streptococcus pyogenis), that they have a pyogenic action, and by their presence complicate primary pathological conditions; they intensify pulmonary inflammation already provoked by the bacillus of diphtheria, and induce blood-poisoning; they are capable of producing pulmonary suppuration. It seems probable that M. Darier has discovered a general pathological principle which may be expressed thus: When a pathogenic microbe penetrates into the human organism, it opens the door to many other micro-organisms which contribute their influence to that exercised by the specific microbe.

EXTRA-CARDIAC BRUITS.

M. F. Franck, who now replaces M. Marey at the Collége de France in the professorial chair, made an interesting communication at a recent meeting of the Biological Society on "Bruits gastriques rhythmées avec le cœur dans un cas de dilatation de l'estomac avec adhérence probable du péricarde" (gastric bruits synchronous with the heart-beats in dilatation of the stomach, with probable adhesion of the pericardium). Since Laennec, several clinicians have recorded metallic cardiac bruits in cases of dilatation of the stomach. Skoda, Dechambre, Gerhardt, Leichtenstern, etc., mention several instances of this kind. Korczynski adds to the number in clinical notes published in 1879, in the *Wiener Medic. Presse* (No. 47). M. François Franck has also observed them, but the subject of his communication to the Biological Society differed in some important respects from the phenomena previously met with. The patient did not pre-

sent a resonant metallic bruit resulting from an exaggeration of the valvular sound, in consequence of the stomach being dilated and filled with gases, but a gurgling systolic bruit (un bruit de gargouille systolique), similar to that when a thick fluid is beaten up. The bruit was at its maximum in the epigastric region, but was heard at a distance. There are two hypotheses to explain these extra-cardiac bruits of gastric origin. The first supposes that at each systole the heart contracts abruptly, and the heart, stomach, or lungs receive a shock; the second believes that the bruit is the result of the contraction of the ventricles when they empty their contents. This theory coincides with M. Potain's exposition of the clinical aspect of the question. He showed that these bruits are not systolic, but meso-systolic, appearing at the same moment that the ventricles empty themselves. The extra-cardiac bruits of gastric origin are owing to dilated stomach or to its walls being flaccid, or to an accumulation of fluid or gases in an organ. In addition to these causes, it is possible that violent systolic contraction of the heart may also enter into the question. Adhesion of the pericardium always increases the violence of systolic contraction. Extra-cardiac bruits, with contraction of the epigastric surface synchronous with the cardiac pulsation and exaggeration of the normal jugular pulse, may be considered as symptoms that indicate with unfailing certainty cardiac symphysia.

In the case of M. Franck's patient, when the stomach was emptied of its gases and of its other contents the bruit disappeared almost entirely. The patient, who was previously much inconvenienced by its presence, was the first to announce its departure, but on auscultation traces of the bruit were detected. It was reproduced when Vichy water was introduced into the stomach, but the gurgling characteristic was absent: this was probably due to the absence of viscosity in the contents of the stomach, and its abundance when the bruit de gargouillement was heard.

DECLINE IN THE CONSUMPTION OF ALCOHOLIC DRINKS.—The report of the Internal Revenue Department shows for the year ending last June a decline of nine millions in taxes as compared with the year before, showing a greatly diminished consumption of alcoholic liquors in this country.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF D. HAYES AGNEW, M.D.,

Professor of Surgery in the University of Pennsylvania, etc.

(Reported by CHARLES BAUM, M.D.)

REMARKS ON WOUNDS OF THE HAND.

GENTLEMEN,—This patient has just been admitted to the hospital. He has been employed at sawing wood, and the soft parts of the middle finger of the right hand have been injured by a circular saw. They are badly lacerated and stripped from the bones, which are much comminuted. The soft parts on the inner aspect of the index-finger are also lacerated, but the bones are not fractured or exposed. Much dirt and tar have been ground into the wound, making any attempt at repair tedious and necessarily accompanied by sloughing.

Wounds of the hand are so frequently encountered that every practitioner should know the anatomy of the part, in order to treat them with success. The hand is complex in its construction, and no injury to it should be dismissed without careful scrutiny. In it terminate the branches of three good-sized arterial trunks, having intimate anastomoses with each other; to it the nerves are very richly supplied; and here, too, the insertions of thirty-six muscles are made, all resting upon a skeleton consisting of some twenty-seven small bones, with curiously but properly constructed articulations, well adapted to combine strength and free motion, and possessing also a large surface of synovial membrane.

In the treatment of wounds of the hand, the first indication is to arrest hemorrhage, which may be accomplished in many cases by approximating the edges of the wound if it be made by a sharp instrument. Bleeding from the digital arteries can usually be arrested by properly-applied compression or by torsion of the vessel. When the palmar arches are divided, the wound should be enlarged if necessary, and both extremities of the bleeding vessel secured by ligature. If only one point is tied, the free inosculation of the vessels will soon cause fresh blood to flow from the wound. After securing the points, it may become necessary at times, as when the coats of the vessel are unsound, to limit

the blood-supply by applying oblong compresses over the radial and ulnar arteries, or to elevate the limb and flex the elbow at an acute angle.

The maximum vital energy of the upper extremity is attained in the hand: therefore, in the treatment of lacerated wounds of this member, after the arrest of hemorrhage and the removal of foreign bodies, the parts should be carefully examined, so as not to remove any portion which may show a sign of vitality. No one factor in the treatment of such wounds can be of such value as irrigation. When first applied, the water should not be too cool, for fear of lowering the temperature of the blood below that degree necessary to separate damaged fragments of tissue and secure repair.

Deep-seated abscesses frequently follow contused, punctured, and poisoned wounds of the hand. They are extremely painful, and are accompanied by rigors, fever, headache, restlessness, and loss of appetite. Unless promptly and properly treated, a stiff, distorted, and somewhat useless hand will result from disorganization of structures. These abscesses form in four localities: first, in the subcutaneous tissues, where they are least harmful, and may readily come to the surface; second, under the middle portion of the fascia, which corresponds to the hollow of the hand; third, beneath the thin expansion of this fascia, which covers the muscles forming the ball of the fingers; and, fourth, under a similar extension of the fascia spread over the muscles of the ball of the thumb. Any collection of pus in the middle portion of the fascia is most dangerous to the usefulness of the hand, owing to the strength of the aponeurosis and its connections with the two middle metacarpal bones. In such cases the swelling is frequently forced up between the metacarpal bones and appears on the dorsum of the hand, and also along the forearm, by being pushed beyond the annular ligament,—thus at times misleading the attending physician.

Palmar abscesses should be evacuated by early incision. In order not to wound the blood-vessels, it should be remembered that the lowest point of the superficial palmar arch corresponds to a line drawn directly across the hand, starting at the junction of the tissues of the thumb and index-finger and ending at the ulnar border. The digital arteries lie opposite the interosseous spaces and divide at the interdigital clefts, sending branches along the sides of the fingers. It is apparent, therefore, that incisions made along the middle of the fingers and metacarpal bones may be carried as high as the transverse line with safety. After dividing the superficial structures, the palmar fascia should be nicked and raised upon a director before opening it more freely. When a palmar splint is used, in all cases of injury of the hand, the padding should be adjusted to allow slight flexion of the fingers.

As the patient is ready, I will dissect the soft tissues from the middle finger and disarticulate at the metacarpo-phalangeal joint; then I will utilize the flap from the dorsal surface of this finger to cover the lacerated inner aspect of the index-finger as far as it will reach: thus doing somewhat of a plastic operation. Although the parts have been well washed with a solution of bichloride of mercury (1 to 1000), it has been impossible to remove all the tar which adheres to some of the fragments. I prefer to allow nature to throw off what cannot be used, instead of sacrificing any likely portion of the tissues. Iodoform will be dusted over the wound, which will be further dressed with lint moistened with carbolized oil.

NECROSIS OF TIBIA, WITH REMARKS.

This colored man is 30 years of age. About twelve years ago he fell and sustained a fracture at the lower fourth of the left tibia. Shortly afterwards an abscess formed over the seat of injury and discharged for several months, after which time a small portion of bone came away, when the wound closed, leaving a depressed cicatrix. Several months ago he received a severe contusion over the seat of the old injury, resulting in inflammation of the periosteum, which extended to the deeper structures and terminated in necrosis of the bone.

It must be remembered that the bones are subject to the same morbid processes as those occurring in the soft tissues, being modified somewhat in the former by the inorganic salts entering into their composition. At present I will confine myself to the results of inflammation upon the osseous system.

Inflammation in a bone passes through the same stages of determination, conges-

tion, and transudation as inflammation in the soft tissues. Any one or all of the structures composing a bone may be invaded. Although the external investing membrane, the bone-structure proper, and the lining of the medullary canal can be separated, yet there is such a close vital connection or continuity between them that disease beginning in one of the three layers may readily extend to the others.

If the inflammation involve the external investing membrane, or periosteum, alone, the process is termed *periostitis;* if the bone-structure proper, *osteitis;* if the lining membrane of the medullary canal, *endosteitis;* and if the medullary lining and the surrounding bone, *osteomyelitis.*

Periostitis may be produced by both local and constitutional causes. Blows, fractures, and gunshot-wounds are the most common of the former; scrofula, syphilis, gout, and rheumatism, of the latter. When inflammation begins in the periosteum, it is rarely confined there, but a portion of the osseous structure is involved, causing an osteitis, and the process may extend, producing osteomyelitis by implicating the medullary canal. Pain in periostitis is usually intensified at night, after becoming warm in bed. The swelling in the circumscribed variety is round in form, not abruptly defined, but fades into the tissues. At the onset redness is not pronouncedly marked. In some cases all the symptoms pursue a very acute course. When of constitutional origin, the symptoms belonging to the particular disease producing it will be present in addition.

The inflammatory lymph and leucocytes thrown out may undergo, first, absorption; secondly, ossification; and, thirdly, pus may form, causing partial death of the underlying bone, and leaving a bone-ulcer to heal by granulation. The flake of bone which is then thrown off is called an exfoliation. This occurs most frequently in children, and may follow a severe contusion which excited inflammation.

Diffuse periostitis usually occurs in persons under twenty-five years of age, often being very formidable and rapid in its course. The limb becomes swollen and painful, finally red, pitting on pressure, exceedingly sensitive and helpless. Rigors and fever usher in or accompany the process. Suppuration finally occurs, and may involve the entire periosteum of the bone, separating the diaphysis from the epiphysis, beyond which the disease rarely extends.

In *osteitis* the same causes are active as those in periostitis. At the onset the symptoms also are similar; but persistence of deep-seated, boring pains and long-continued alternations of improvement and relapse will indicate bone-inflammation. If the disease progresses, caries or ulceration occurs, with thickening around the bone, while the tissues are infiltrated with inflammatory deposits. Finally, a film of bone is exfoliated, an abscess forming to discharge it. At this stage a probe will detect either a movable fragment or come in contact with an irregularly-roughened, exposed bone. The ulcer which remains may undergo changes similar to an ulcer in the soft parts,—may heal, extend in width and depth, remain indolent, or fill up with granulation-tissue, which may extrude from the sinus in the tissues, and then is commonly called "proud flesh." In Pott's disease of the spine, caries often undergoes repair without producing an external opening.

Caries spreads most rapidly in bones having many cancelli: therefore the carpus, tarsus, vertebral column, and articulating ends of the long bones are most frequently involved. In favorable cases the extension of caries is limited by an inflammatory infiltrate which fills up the cancellated tissue of the surrounding sound bone, thus preventing an advance and at the same time favoring the separation of the diseased particles. Rarely does inflammation, when fully established in bone, end in resolution. Diffuse suppuration and abscess also may follow osteitis.

Endosteitis and *osteomyelitis* usually go hand in hand, and mostly result from gunshot-wounds, amputations, and fractures. A vitiated atmosphere, as in many large hospitals, is conducive to their development. In many respects the process resembles hospital gangrene. When the affection occurs in military practice, termination by resolution cannot be expected, owing to the great shock to the bone resulting from the injury and the unfavorable hygienic surroundings.

Very often it is difficult to recognize osteomyelitis. If deep-seated pain, great uneasiness in the limb when it is moved, and œdematous swelling with prolonged

suppuration follow an injury to a bone, the disease may have developed. In addition to these signs, the diagnosis is rendered more certain if the soft parts have separated from the bone and there is marked loss of strength, with rigors and fever.

Some of the symptoms of periostitis and endosteitis are similar, but when closely observed it will be found that the pain in the former is local and is increased by the slightest touch; in the latter the pain is diffuse and requires somewhat firm pressure to increase it. In the former, the swelling accompanies the pain at the onset of the disease; in the latter, pain will continue a long time without any visible swelling. In periostitis knotty and irregular deposits are liable to occur upon the bone.

Necrosis of the affected bone and death from pyæmia are apt to follow osteomyelitis.

We now come to consider necrosis, that for which our patient has applied for treatment. When first employed, the term necrosis was used to designate death of a bone, but recently the word has been extended in meaning to embrace death of any tissue. Necrosis and caries bear the same relation to each other that mortification and ulceration in the soft parts do, being the same in kind but of different degree, —the former meaning death of a tissue in a large mass, and the latter death by particles. The disease shows a marked preference for the shafts of the long and short bones, but the flat ones do not escape.

In my judgment, a very large proportion of all cases of idiopathic necrosis can be traced to a constitutional vice. Injuries also are factors in the causation. Children under fifteen years of age furnish a large number of such cases; in them the scrofulous diathesis is usually observed. With such a systemic vice, a slight injury, insufficient food, exposure to cold, suppressed perspiration, or any low fever may be sufficient to develop inflammation which will terminate in death of a portion of the bone. Match-makers and those exposed to the fumes of phosphorus are liable to a peculiar form of necrosis attacking the maxillæ, and termed "phosphor-necrosis."

Whenever the blood-supply is cut off from any portion of a bone, that portion must die. Dead bone is a foreign body, and to effect its separation a wall of increased blood-supply is raised; free transudation then occurs, which serves to prevent absorption of morbid matters and aids in separating the dead from the living portion. All the changes which produce the separation occur in the living bone. A detached scale of bone from the periphery is called an exfoliation. The cavity resulting from this loss is a bone-ulcer, which must heal by granulation, forming a depressed cicatrix at the seat of the disease.

If death of a portion of the deeper structure of a bone occurs, the same process is employed by nature to separate as that used in peripheral necrosis. In central necrosis the dead portion or sequestrum is surrounded by a sheath or involucrum of living bone.

A sequestrum presents a peculiar, smooth, porous, or worm-eaten surface, with jagged or spiculated edges. This irregular form is not due to the effects of pus, in which the sequestrum is bathed, as was formerly taught, but to the irregular proliferation of granulation-tissue separating the dead from the living bone. The same irregular appearance is noticed when a slough is separated from the soft parts. When a central necrosis is present, the osteogenic function of the periosteum becomes exceedingly active, and a deposit of bony matter or callus takes place on the outer surface, increasing until the shaft may become very greatly thickened. Where the periosteum is deficient, openings or cloacæ are formed to allow exit for the products of inflammation. As cloacæ are not present in all cases, the inflammatory products must have been removed by absorption.

The symptoms first manifested in necrosis are those of ordinary osteitis. After a variable period of suffering, if indurated swelling and abscesses in the soft parts follow, with persisting sinuses capped with unhealthy granulations, the doubt is removed. The condition will be verified if denuded bone can be touched by passing a probe along one of the fistulous tracts.

Great care must be exercised in giving a prognosis in cases of necrosis. In young, strong persons, if the disease is limited and not deeply situated, a favorable result may be expected. Necrosis of the femur is much more serious than that of the tibia, while necrosis of the cranial and pelvic bones is accompanied by still greater danger. Should the articulating portion

of a bone become invaded, the risk to limb and life is greatly enhanced. As the patient increases in age, as a rule, his chances for recovery decrease. During the course of necrosis of the cranial bones, meningitis and intracranial abscess may occur. Anchylosis and even the loss of a limb may result from a sequestrum entering or lying within a joint. In working its path to the surface a sequestrum has ulcerated through the walls of a large blood-vessel and induced fatal hemorrhage. Amyloid and fatty changes in the internal organs, especially the kidneys,—the so-called "surgical kidneys,"—may be induced by the prolonged suppuration; also pyæmia, erysipelas, and pulmonary tuberculosis are liable to develop during necrosis. In view of all these dangers, the surgeon should be watchful to operate at the first proper moment.

This brings us to consider the treatment of necrosis. Our first effort should be to limit the process of inflammation by elevating the limb, accompanied by local depletion, anodyne lotions, and poultices. Often a blister is followed by good results. Constitutional medication should not be overlooked, especially in cases of syphilitic and rheumatic origin, in which iodide of potassium and cod-liver oil are of great service. Any collection of pus should be liberated as soon as detected, thus avoiding much suffering, and in delicate subjects even danger to life. When the process is restricted to the external lamellæ of the bone, pain can be greatly relieved and the inflammation often limited by means of an early deep incision, laying open the periosteum in a line with the long axis of the bone.

The second point in treatment is the removal of the sequestrum. Suppuration and sinuses will continue as long as the dead bone remains; therefore it should be removed as early as possible. The rule for any cutting operation for this purpose is well established,—namely, do not operate until nature has separated the dead fragment. Many months, or even years, may elapse before the proper time comes. When an operation is attempted at too early a date, the inflammation which is excited as the result of minute fracturing of the bone may destroy a large extent of previously uninvolved bone.

In order to determine when the fragment is free, a director, which owing to its strength is better than a probe for this purpose, should be passed along a sinus, and by pressing upon the fragment its mobility can be determined. Should a sequestrum ulcerate into a main arterial trunk, amputation will afford the strongest hope of recovery; but should a smaller vessel be implicated, the parts must be freely laid open and the vessel tied at the point of injury.

In our patient the disease is limited and the thickening over the bone is not very great. There is one sinus, along which I now pass a director and readily detect a movable piece of bone. In order to prevent hemorrhage, an Esmarch's elastic bandage will be applied, thus making the operation almost bloodless. When such a roller is not at hand, and free bleeding is expected, a tourniquet should be applied over the main trunk supplying the limb. All incisions should be planned to avoid important nerves and blood-vessels. If two openings or cloacæ in close proximity are observed upon reaching the bone, it is proper to cut through the bridge between them by means of strong cutting-pliers; otherwise, with a chisel and mallet an opening is made through the ring of newly-formed bone and thus the sequestrum exposed. Owing to the irregularities of the living bone, it may be necessary to pry the dead portion out by means of a lever. If the sequestrum be too large to pass through the opening made in the involucrum, the former may be cut and be extracted in pieces. Before dressing the wound, a finger should be introduced into the cavity to search for any fragment of dead bone. If the walls feel velvety and soft, due to granulation-tissue, you can be assured all dead particles have been removed. The wound should then be washed thoroughly with mercuric chloride solution (one to two thousand), and packed with lint moistened with carbolized oil, thus preventing union of the soft parts and affording a channel of escape for any discharge which may result.

[The operation was successfully performed.]

NOTE.—The patient from whom Professor Agnew removed a papilloma of the bladder by perineal section—reported in the *Medical Times* of January 9—has returned to his home, without any remaining symptoms of discomfort.

TRANSLATIONS.

Experiments upon Protective Charbon-Vaccination in Russia.—The experiments on splenic-fever inoculations made in Dorpat by Prof. E. Semmer and his confrères, with both imported and original virus-cultures, had not been attended with success, and protective inoculation in Russia was considered a failure, until Prof. Zenkowski recently decided to investigate the subject anew in South Russia, where large flocks of sheep were placed at his disposition by their owners for the experiment. Having prepared his own virus, according to Pasteur's method, in the botanical laboratory of the University of Charkow, Zenkowski vaccinated, in the summer of 1885, about thirteen hundred and thirty-three sheep, with the following results: the loss after the first vaccination (with *premier vaccin*) amounted to from 1.55–1.6 per cent.; after the second (with *deuxième vaccin*) from 0.099–0.3 per cent.; or an average of 1.8–2.0 per cent.

In November, 1885, a commission officially appointed by various agricultural societies and representatives of the government selected thirty head from the previously-inoculated flock and submitted them to the test of inoculation with fresh charbon-virus, at the same time taking ten other sheep which had not been previously vaccinated for comparison. Within twenty to forty hours after the inoculation, eight head of the previously-unprotected sheep died, and on the sixth day the ninth succumbed to well-marked splenic fever; only one survived out of ten.

The thirty vaccinated sheep showed on the day following the trial a rise in temperature from 39.9° to 41.6° C.; but it fell on the fourth day to the normal, 39.5°. One of these sheep was worried to death by dogs, and another died of pleuro-pneumonia a few days after; no trace of anthrax-bacilli could be found in the blood or tissues of either.

These experiments of Zenkowski are of great importance to the sheep-raising interest of South Russia, where the frequent ravages of splenic fever have caused a loss of over twelve per cent. in a single year. These losses, it is claimed, can be reduced to from two to three per cent. by properly-conducted vaccination.—*Centralblatt für die Medizinischen Wissenschaften*, No. 1.

The Fate of Disease-Germs in the Organism.—Following the suggestion given by Metschinkoff, who showed that the intracellular digestive process exercises a very important function in destroying bacteria, Dr. Ribbert (*Deutsche Med. Wochenschrift*, No. 31) endeavored to determine more positively the exact means of its accomplishment. It had been ascertained that the bacteria speedily die when they become enveloped by protoplasm, and are, in fact, destroyed in large numbers by being included by the white corpuscles, because they are thus isolated from their nutritive materials (acids, etc.). This process was observed occurring in the interior of the liver, lungs, and spleen of rabbits after spores of mould-fungus had been introduced into the blood. In these animals, wandering cells quickly formed a zone around the masses of spores, and promptly led to their destruction. With regard to the rôle played by the kidneys, while it is true that all kinds of germs may find their way out of the body by this route, they are not only excretory organs for the parasites, but they also may increase and develop into inflammatory centres, and it is not improbable that the body may be again infected from these new centres.

The Zymotic Action of Certain Pathogenic Micro-Organisms.—M. Arloing, in a recent communication to the Académie des Sciences, stated that he has made experiments with four different kinds of virus,—blood from charbon (Toussaint), puerperal septicæmia, gangrenous septicæmia, bovine symptomatic charbon. The results are as follows: the anaërobic virus of gangrenous septicæmia of bovine emphysematous charbon (or charbon de Toussaint), when fresh, produces butyric fermentation in most of the fermentable sugars and in several neuter hydrocarbon substances. Almost the same results are obtained with virus recently dried; but when virus has been dried some time, or when their pathogenic activity is diminished by the action of heat, they lose their zymotic action, but retain nevertheless their dangerous properties: therefore the deduction follows that the pathogenic properties of virulent micro-organisms are in a degree separate from their zymotic properties. The latter disappear the first, which indicates that they are contained in the mycelium and not in the spores.

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EDITORIAL.

ALCOHOLIC PARALYSIS.

AMONG the disorders of the nervous system which may follow the prolonged use of alcohol certain forms of paralysis occupy a prominent position, and of late we have obtained a considerable body of clinical and pathological evidence which has materially widened our conceptions of these affections.

Of recent papers on the subject those of Schultz (in the *Neurologisches Centralblatt*, 19–21, 1885) and of Dreschfeld (in *Brain*, January, 1886) are perhaps the most important. The latter gives an exceedingly interesting historical note, which shows that the credit of having first accurately described the condition must be attributed to James Jackson, of Harvard, in 1822, and, from the quotations given, we feel that Dr. Dreschfeld is most just in characterizing his communication as "a very succinct and at the same time very accurate and complete account of alcoholic paralysis."

Two forms may be recognized,—one with a preponderance of ataxic symptoms and very little paralysis, the other with marked paralysis and but slight ataxia. The ataxic form, spoken of by some writers as the "pseudo-tabes of alcoholics," is a milder type, and the similarity to ordinary locomotor ataxia may be very striking: indeed, the cases are not infrequently regarded as instances of this disease running a rapid course. There are the severe tearing pains, the uncertain gait, with the feet wide apart, and the absence of tendon reflexes. According to Schultz, the differential diagnosis lies in the relatively more acute course, in the earlier appearance of wasting of muscles, which is a late feature in genuine tabes, in the marked diminution of the electrical irritability, and in the absence of the Argyl-Robertson pupil, the girdle sensation, and the sphincter disturbances. In alcoholic cases there is almost invariably slight fever.

In the typical cases of alcoholic paralysis, loss of power, with wasting of the muscles, comes on either acutely or slowly, and affects chiefly the extensors of the fingers and toes. The patients often come under observation when unable to stand or walk, and it may be impossible to say whether there is a preliminary ataxic stage. Of this form, Ross, in his recent "Hand-Book of Nervous Diseases," gives an excellent description. The limitation of the paralysis to the extensors of the feet and hands is very peculiar, and there may be double wrist-drop, as in lead-palsy. Sensory disturbances are common, particularly tearing pains and cutaneous hyperæsthesia. Vaso-motor disorders are shown in the congested state of the extremities, to which Broadbent directed special attention, and there may be œdema. The tendon reflexes are abolished, but the cutaneous reflexes may be, according to Schultz, normal, though Ross and Dreschfeld speak of them as diminished or absent. The affected muscles usually show the reaction of degeneration. The disease seems more common in women than in men,—a point which Jackson noted.

Of eleven cases tabulated by Schultz, five died, four recovered, and two were improved. Of fifteen recent cases mentioned by Ross and Dreschfeld, three died, five recovered, and the others were under treatment.

The morbid anatomy of this disease has been carefully studied in five or six instances, and the lesion in each case was found to be a peripheral neuritis, without any affection of the spinal cord. There

can be very little doubt that the instances of peripheric nerve-tabes described by Dejérine and others, in which, with marked ataxic symptoms, the cord was found intact, were cases of alcoholic ataxia.

In addition to these forms, we may also recognize an alcoholic paraplegia, a condition referred to by many writers, notably Wilks, whose account, however, resembles in many respects that of James Jackson. The paralysis was not complete, and the cases come rather under the form we have already discussed. But there is a form of paraplegia in drunkards of which we have seen at least two examples, coming on suddenly and tending to complete loss of power, which may last for several days and then gradually disappear. Such cases are doubtless spinal, and not related to the incomplete paralysis dependent upon peripheral neuritis.

CONGENITAL DISPLACEMENT OF THE HIP-JOINT.

CASES of congenital displacement of the head of the femur are of comparatively rare occurrence. Perhaps this may be regarded as fortunate, since their treatment has not hitherto yielded brilliant results. Indeed, in those with marked deficiency in the development of the acetabulum, the best surgical authorities have agreed, almost without a dissenting voice, that palliative treatment is alone admissible. Heusner, in 1884, in a girl 20 years of age, performed an excision of the head and neck, with nearly an inch of the shaft of the left femur, and with a gouge deepened the acetabulum. In eleven weeks the patient was able to walk with the aid of a cane, and eventually made a satisfactory recovery. This case was reported to the meeting of the Deutscher Naturforscher und Aerzte in Magdeburg, when the novelty of the treatment—this being the first case which had been subjected to excision for congenital dislocation—and the successful issue attracted general attention.

A far better result, however, has been quite recently obtained by an American surgeon, Dr. Buckminster Brown, of Boston, without excision or other operative interference. In his case the patient was a female child 4 years of age, in whom there was double dislocation of both femurs and entire absence of cotyloid cavities. In the report of the case published in a monograph (also in the *Boston Medical and Surgical Journal*), four phototype illustrations admirably show the deformity and the application of the apparatus most ingeniously devised by the author, as well as the effects of the treatment. The child, in a period of a little over six months, and as a result of measures skilfully adapted to the conditions, was supplied with good, serviceable acetabula, in which the heads of the bones were permanently retained, even when the little patient resumed her walking exercise. The principle of treatment was to endeavor to secure by fixation and pressure a certain amount of absorption of the surface of the ilium in the normal site of the acetabula. This was accomplished by a simple form of apparatus for securing extension and counter-extension, position, and passive motion. During a portion of the time the child was, for several hours daily, placed in a prone position, with the thighs at right angles to the body and everted, in order to exert more pressure upon the ilium. The success obtained by this judicious and skilful treatment was most gratifying.

On the fourteenth day of January, 1884, the little girl was allowed to sit up in bed, for the first time in thirteen months, and experiments in locomotion with a wheel-chair were begun; six months later she walked with canes; and by January, 1885, she was able to walk without canes, but there was still present some evidence

of spinal debility. Displacement of the femurs had not taken place since March, 1883. The final note of May 25, 1885, stated that the child's walk was normal; she could step with natural firmness and vigor; she walked with ease, and, like other children, took especial pleasure in running.

We believe that this case marks a new departure in orthopædics, and both on account of the novelty of the measures employed and their skilful application do we feel warranted in thus directing the attention of our readers to what we must regard as a great achievement of American surgery.

THE RANK AND PAY OF HOSPITAL STEWARDS IN THE ARMY.

WE have been informed that efforts are being made to induce the present Congress to raise the grade and increase the pay of hospital stewards in the army.

A hospital steward's duties are to compound the medicines prescribed by the medical officer; to keep the records of cases; to make and record meteorological observations; to make out the routine medical reports of the post or hospital; to have immediate charge, under the surgeon, of the hospital and medical stores; and, in general, to act as clerk to the medical officer.

For these manifold and responsible duties, requiring for their proper performance a pharmaceutical education and no little executive ability, the hospital steward receives compensation at the rate of thirty dollars per month and the necessary allowances of clothing and rations. His rank is the same as that of the staff-sergeants of a regiment, and his only way of getting appointed to the position is by enlisting as a private soldier, after which he may or may not receive the appointment.

While we think that more care should be exercised than at present in selecting men for these positions, there can be no doubt that the pay is entirely inadequate and the rank of the steward absurdly out of relation with his duties and responsibilities.

We trust that the efforts for the improvement of the grade and pay of these men will be successful.

PROTECTIVE INOCULATION IN SMALLPOX AND RABIES.

IN the letter of Dr. Schultze published in our last issue, the comparison is instituted between the failure of inoculation for smallpox and the present public agitation of the question of the protective inoculation for rabies. Dr. Schultze calls our attention to the fact that the statement that "inoculation has been abandoned" should not be construed to mean that vaccination has been abandoned. He desires, however, to make the point clear that there can be no overlooking the fact that there are many people, intelligent in other things at least, if not in this, who doubt the efficacy of vaccination against smallpox, and there certainly will be far less opportunity for establishing the efficacy of such treatment (inoculation) in preventing the development of hydrophobia.

NOTES FROM SPECIAL CORRESPONDENTS.

BOSTON.

THE Obstetrical Society of Boston, the earliest organization of the sort in this country, has just completed the first quarter-centenary of its career, and celebrated the event January 5 by an elaborate banquet at Young's Hotel. The entire active membership of the Society, except four who were unavoidably detained, were present. The President, Dr. A. D. Sinclair, occupied the head of the table, and among the guests of the evening were Drs. Fordyce Barker, G. Kimball, of Lowell, and John Homans, of Boston. Letters of regret at unavoidable absence were read from many distinguished gynæcologists and

obstetricians, among the number being Drs. Goodell, of Philadelphia; Thomas, Emmet, and Lusk, of New York; Skene, of Brooklyn; H. P. C. Wilson, of Baltimore; W. S. Playfair, of London; A. R. Simpson, of Edinburgh; G. H. Kidd, of Dublin; and Litzmann, of Berlin. The speaking, much of which was of historical interest and value, comprised a fitting introduction by the President, a brief sketch of the history of the Society by Dr. B. E. Cotting, remarks on the deceased original members by Dr. G. H. Lyman, on the future of the Society by Dr. J. P. Reynolds, a response for the guests of the evening by Dr. Barker, and for gynæcology by Dr. John Homans. Dr. Kimball, of Lowell, one of the pioneers of ovariotomy in this country, also gave an account of some of his early operations.

Dr. Sinclair said, in his remarks, that the Society originated very shortly after the Obstetrical Societies of Berlin and of London, of which the former completed its quarter-century a few months ago, and the latter in February, 1884.

Dr. James H. Whittemore, the Superintendent of the Massachusetts General Hospital, died early in the year of a most painful affection from which he had been suffering for some two years. Patches of psoriasis on each of the hands took on a malignant epithelial character, and, the diagnosis being confirmed by eminent Continental surgeons whom he consulted, he submitted to an operation for the removal of one hand and portions of the other. This stayed the suffering for a time, but it returned with great severity, as the disease invaded successively many of the vital organs. Dr. Whittemore had served as assistant physician at the McLean Asylum for the Insane until his appointment to his superintendency, some nine years ago. His discharge of the duties of this position met with most unqualified approbation from all in any way connected with the hospital, and his heroism in the endurance of suffering excited universal admiration. He died at the early age of forty-six.

The Massachusetts Sewerage Commission, appointed nearly two years ago to investigate the methods of sewage-disposal best adapted to the various river-basins of the State, with a view to preventing the contamination of the water-supply of any municipality through the sewage of any other, has prepared a lengthy and exhaustive report to the Governor, in which it has availed itself abundantly of the best engineering skill. By maps and plans the solution of the problem is indicated for most of the towns and cities liable to infringe upon one another's inalienable rights to pure air and water. Comprehensive systems, adapted not to municipal boundaries, but to the physical conformation of the country, are favored, and the estimated total expense is apportioned equitably among the different cities and towns. Mr. Eliot C. Clarke was the advising engineer, and his and the Commission's work was revised by two consulting engineers, Messrs. Joseph P. Davis, of New York, and Rudolph Hering, of Philadelphia. Intermittent downward filtration is the method considered most efficient for depurating sewage, and is said to be capable of filtering ten times as much sewage as can be absorbed advantageously by any crop. Hence no attempt is made to secure profitable farming, but the prime motive is to filter as much sewage as possible. Broad sewage-irrigation, owing to the large area which it requires, is held to be impracticable; so also are the precipitation and depositing processes through the aid of lime, on account of the abundance of the sludge produced, which can neither be given away as a fertilizer nor discharged into a stream. In most of the large sewers required for Eastern Massachusetts, Boston is made to pay a portion of the expense on account of her great interest in the maintenance in a state of purity of her various sources of water-supply. These sources of supply are, unfortunately, so scattered that she must contribute to the drainage of several river-basins.

The vacancy in the chair of Obstetrics at the Harvard Medical School, caused by the resignation of Dr. J. P. Reynolds, has been filled by the appointment of Dr. W. L. Richardson, for some years assistant professor in that department, and visiting physician to the Massachusetts General and Boston Lying-In Hospitals.

Dr. W. B. Goldsmith, Superintendent of the Darwin Lunatic Asylum, the largest of our State hospitals for the insane, has been appointed Physician and Superintendent of the Butler Hospital for the Insane at Providence, Rhode Island, to succeed the late Dr. John W. Sawyer.

The first of a series of social gatherings of the members of the Medical Library Association took place at the Library Building January 15. On this occasion Mr. Cushing, the ethnologist, gave a description of the medical practice of the Zuñi Indians, as observed by him during his extended residence among that tribe. On a similar occasion in the near future a talk is promised by Dr. David Hunt on medical engravings, which will be illustrated by abundant specimens.

On the evening of January 29 an informal inspection of the new Nurses' Home in connection with the Boston City Hospital, of which some description has already appeared in your columns, was made by a number of ladies and gentlemen on the invitation of the Trustees. Some two hundred invitations had been issued, but the evening proved so inclement that many were unable to attend. Those who did so were apparently well pleased with the completeness of the arrangements for the health and comfort of the occupants. The library for the use of the nurses

has recently received a gift of five hundred dollars from Dr. Charles G. Weld, formerly a house-physician in the hospital, and a grandson of the late William F. Weld, of Philadelphia.

The Massachusetts General Hospital receives a legacy of ten thousand dollars from the estate of Mr. Henry P. Kidder, who died last week. C. F. W.

BOSTON, February 10, 1886.

BALTIMORE.

AT the last meeting of the Clinical Society, held on the 5th instant, Dr. Samuel Theobald read notes of a series of cataract operations by Von Graefe's method. In two of the cases Forster's method of hastening the ripening of the cataract was resorted to. One case reported presented the peculiarity of exceedingly rapid development. The patient, who was a shoemaker, had been able to work at his trade without any noticeable defect of vision up to a week before he applied for treatment, when the power of sight was entirely gone. In only one out of the seventeen cases reported did any bad results follow. In this case, although the operation was done without any untoward results, panophthalmitis followed, and the eye was finally enucleated. In most of the cases excellent vision was secured.

A paper on the latest therapeutic novelty, "Pneumatic Differentiation," was read by Dr. F. Donaldson, Jr. The immediate effects of treatment in the atmospheric cabinet are wonderfully favorable,—respiration becoming easier, cough diminishing, night-sweats disappearing, and the body-weight increasing. In his experience, Dr. Donaldson had not noticed any unfavorable effects.

Dr. I. E. Atkinson read an exhaustive paper upon the nature, frequency, prophylaxis, and treatment of scarlatinal nephritis. The various forms of inflammation of the kidney accompanying or following scarlet fever were thoroughly discussed, and their relations to the general disease considered. Dr. Atkinson considers the nephritic complication to be an essential part of the disease, and not an accidental sequel.

Dr. Whitfield Winsey read the notes of an extremely interesting case in which the patient had had adherent placenta, with hemorrhage, in eight out of eleven labors. In the last labor the patient succumbed to shock.

Dr. Moale exhibited a plaster cast showing the deformity resulting from a probable fracture through the internal condyle of the knee-joint. The patient had received no surgical attention at the time of the accident, and considerable deformity had resulted. The accident is an extremely rare one, only fifteen recorded cases being known to surgical authorities.

At another meeting of this Society recently, two cases of laparotomy for intestinal obstruction were reported by Drs. Frank West and Randolph Winslow. Both cases made a satisfactory recovery. The usual (apparently unavoidable) discussion on the value of antisepticism followed, in which the antisepticists seemed to have rather the advantage.

At the same meeting of the Society Dr. Clinton McSherry exhibited an interesting case of displacement of the heart to the left side, in consequence of retraction of the lung on that side. The apex-beat of the heart could be felt a little over two inches to the left of the left nipple, in the sixth intercostal space.

The pathological laboratory of the Johns Hopkins University is being rapidly put into a condition for practical work under the direction of Dr. William H. Welch, the Professor of Pathology. The laboratory is located in what is known as the autopsy building attached to the Johns Hopkins Hospital. The lower portion of the building will be used as an autopsy theatre, library, and possibly a city morgue, while the second floor is occupied by a museum, laboratories for the Professor of Pathology, his assistants, and students. The rooms are handsomely fitted up, and the apparatus is complete and of the most approved forms. Dr. Welch has just begun a course of lectures in the University on pathogenic micro-organisms. The lectures are delivered every Wednesday afternoon at five o'clock in Hopkins Hall.

The Medical and Chirurgical Faculty of Maryland is agitating the question of a medical law for this State. At a meeting held a few days ago a draft of a bill to be submitted to the Legislature was adopted, and a committee appointed, with instructions to advocate the passage of the bill before the Legislature. The bill is similar in its main features to that in force in Illinois, which has been so efficient in its working in that State.

The necessity of some law to regulate medical practice here is made evident by an incident which happened at the health-office in this city a short time ago. A female practitioner, who appends to her name the initials "M.D., V.D., C.M.S.," certified to the death of a patient under her charge. As she was not registered at the health department, as required by a city ordinance, she was sent for and informed of the necessity of registration and asked to show her diploma. She presented a diploma purporting to be issued by the "American Health College and Vitapathic Sanitarium." This the Health Commissioner declined to recognize, informing her that the institution was a fraudulent one. The "Doctor" then wrote to the president of her Alma Mater, stating that her diploma was refused recognition, whereupon she received a reply from which I give an interesting extract:

"Vitapathic Minister Physicians, who ad-

vertise and Practice Vitapathy in NAME *and* NATURE dont need to Register they are not M.D. Medical Doctors and Medical Boards and Medical Laws have nothing to do with them, Vitapathic Physicians dont have their Patients Die or if they did, or will die turn them over to some M.D. in time. *Our full Graduates* are Practicing in all the States with safety and success. We have fully Provided for all our Graduates to Practice *Vitapathy*."

The suggestion that "Vitapathic Physicians" should turn their patients over to some M.D. before the disease terminates fatally is almost as brilliant as the remark of the female partner of one of your Philadelphia irregulars, who testified some time ago that M.D. meant "Money Down," and not "Medical Doctor." G. H. R.

February 6, 1886.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, JANUARY 7, 1886.

The President, B. F. BAER, M.D., in the chair.

DR. HOWARD A. KELLY exhibited recent specimens of pyosalpinx, hydrosalpinx, and papilloma of the hilum with gelatinoid thickening of the Fallopian tube. The histories of the cases will be given at some future time.

Dr. GOODELL stated that, while he recognized the necessity for operation in pyosalpinx, he did not think it necessary in hydrosalpinx. He now refuses to operate in some cases of cystic disease in which one ovary may contain a cyst as large as an orange, or in which the tube may be distended to the size of a sausage, because the sufferings of the patient and her general symptoms are not severe enough to warrant the operation. In many of these cases the symptoms may all be removed by the rest-treatment, and it should first be tried. Small cysts are frequently found in ovaries, especially when uterine fibroids are present, but they do not necessarily develop into large ones. In many cases the cause of pelvic symptoms can be diagnosticated by exclusion only, and, even when small cysts or dilated tubes can be felt, treatment should be first tried, and will be sometimes successful without operation. He thinks the error of the present time is in the direction of too much surgical interference.

Dr. MONTGOMERY remarked that there was a class of cases suffering from small ovarian cysts or distended tubes, in which the rest-treatment or any other loss of time could not be thought of, and in which operation seemed imperative. This was on account of the pecuniary condition of the patient, who may be self-supporting or who may be the only support of others. The suffering and exhaustion of the disease incapacitate them from work, relief is imperatively demanded, and he considered operation justified.

Dr. GOODELL recognized this element of poverty, and has operated for this reason in some instances. He was led to make his remarks by a case now under his care. A lady was sent to him for operation, after an opinion had been given by an experienced gynæcologist of another city that relief could be obtained by operation only. On one side the ovary was enlarged, and the other ovary was prolapsed and tender. Rest-treatment had wholly cured her. In these remarks he casts no reflection on any of Dr. Kelly's cases. Pus was present in all of them, and operation seemed to be demanded in all.

Dr. BAER has been strongly impressed lately with the views expressed this evening by Dr. Goodell. Dr. Baer thought all conservative means should be tried before operating.

Dr. KELLY replied that he had presented the specimens purely from an anatomical and pathological stand-point, and that he will give the histories at some future time, when the results of operation are well demonstrated. In each of them operation was imperatively demanded to save life. It is in such cases as those presented this evening that the great work in the future must largely lie. If the details of ovariotomy have been perfected, in such cases as these the chapter is only being opened. They are not examples of Battey's operation or Tait's operation, but stand as representatives of classes of disease well defined, with equally well defined indications for treatment. The extraordinary difficulty of digging such masses as these out of the pelvis makes operative interference very fatal, although it is the only resort.

Dr. WILLIAM GOODELL read a paper on

A YEAR'S WORK IN LAPAROTOMY.

During the past year he had had forty-four cases of laparotomy, with four deaths, as follows:

	Cases.	Deaths.	Recovery.
Ovariotomy . .	28	2	26
Oöphorectomy . .	9	1	8
Hysterectomy . .	2	1	1
Exploratory incision .	4	0	4
Pelvic abscess . .	1	0	1
Totals . .	44	4	40

Of these forty-four cases, twenty-five had been operated on at his private hospital, with two deaths; twelve were operated on at the hospital of the University of Pennsylvania, with one death; and seven were operated on at the homes of the patients, with one death.

Of these four deaths, one only was due to septicæmia, and that, a case of oöphorectomy, occurred in a private room of the hospital of the University. It was not, however, due to hospitalism, but to the adverse complications of the case. The ovary and oviduct were filled with pus and so matted by inflammation to adjacent structures that only a portion of them could be removed, and that in fragments. The pus unavoidably escaped into the peritoneal cavity, which was carefully cleansed and a drainage-tube put in; yet a fatal inflammation set in. Another death was due to shock after the removal of the womb containing a fibroid tumor with extensive adhesions and weighing seventeen pounds. The two deaths after ovariotomy were not due to septicæmia, and are somewhat mysterious. One case was operated on at the patient's home, in Bedford, Pennsylvania, and Dr. Goodell did not see her again. The cyst was parovarian, weighing forty-three pounds; was without an adhesion, and easily removed. The stitches in due time were removed, the bowels were opened, and everything did well for twelve days. Then obstinate vomiting set in, and the lady died on the seventeenth day. Six months previously she had had an analogous attack of vomiting, in which her life was despaired of. The fourth death took place from a supposed attack of malaria, to which the patient was liable. Both ovaries had been removed, the larger one weighing about thirty pounds. There were omental adhesions and very firm parietal ones, needing a number of ligatures. She recovered promptly from the operation. The wound united, the stitches were removed, and she was allowed to sit up out of bed. On the seventeenth day malarial fever with bilious vomiting set in, and she died rather suddenly on the twenty-first day, with symptoms of heart-clot.

Of the nine oöphorectomies, four were performed for ovaralgia, three for bleeding fibroid, one for epilepsy, and one for a menorrhagia which had resisted every known therapeutic measure.

In three cases of ovariotomy, all of them with papillary cysts, rupture had taken place a few hours before the operation, but although the peritoneum seemed thickened and injected no bad result followed. He considered papillary cyst to be benign in the very great majority of cases, and that the danger from the escape of ovarian fluid into the abdominal cavity was very much overrated. He had not refused to operate in a single instance of ovarian tumor, no matter how low the patient was or how firm were the adhesions. He had consequently had several exceedingly difficult operations. Out of his twenty-eight ovariotomies, there were twenty-one with adhesions. In four the adhesions were universal, in eight more they were intestinal, and in three they were uterine. This very large proportion of adhesions, when compared with those of European operators, he could explain only on the theory that physicians in this country have not yet been educated up to the idea of an early operation, and to a recognition of the evils of tapping. In the successful case of hysterectomy a tumor weighing eight pounds was removed, together with a portion of the enlarged womb. As the uterine cavity was not invaded, the large pedicle was transfixed, tied, and dropped. The four exploratory incisions were made with the view of removing the ovaries on account of fibroid tumors of the womb. But in each the tumor was so fixed by adhesions that the ovaries could not be reached, and the patients had previously stipulated that in that case the uterine growth was not to be removed. All did well. So also did a case of pelvic abscess communicating with the bladder and rectum. It was opened per vaginam by means of the abdominal incision, by which its exact position and size were determined.

With regard to the technique of the operation for laparotomy, Dr. Goodell stated that he used the ordinary knot and the Staffordshire knot indifferently; that he now, in the long incision, cuts directly through the umbilicus, instead of going around it on the left side; that he includes the recti muscles and all the tissues in the abdominal sutures; and that, while not a very firm believer in the spray part of antiseptic surgery, he had resorted to the atomizer in every case but one, and that one did as well without it as most do with it.

Dr. MONTGOMERY thinks Dr. Goodell should be congratulated upon his success, which is remarkable for operations in unselected cases in the United States. He thinks the knowledge of the safety attending the application of Monsel's solution to oozing abdominal surfaces very gratifying. He would have used it recently but for the fear of bad after-effects. He must, however, again enter his plea for the second ovary. In young women small ovarian cysts are common; they are frequently found in post-mortem examinations when there had not been the slightest evidence during life of their presence; and evidently these small cysts do not necessarily develop into large ones. The two cases of secondary ovariotomy reported by Dr. Goodell are not sufficient to warrant the rule of removing the second ovary when it is but slightly diseased. As a counterweight to Dr. Goodell's cases he would mention that, in the instance of a young married woman from whom he removed an ovarian tumor, and in which he left the other ovary, which was slightly affected, pregnancy has since occurred, followed by the delivery of a living child.

Dr. KELLY remarked that Dr. Keith had had remarkably good results from the application to oozing surfaces of a solution of

persulphate of iron. He has observed the gradual disuse of carbolic acid in washing-waters in operations. Dr. Kelly prefers boiled or distilled water, as used abroad, as he is sure that carbolic acid and other germicides are frequent causes of poisoning and bad results after operation. He asked Dr. Goodell what were his rules respecting the use of the drainage-tube.

Dr. BAER had experimented with Monsel's solution. In one case in which he used it he attributed the fatal result to it. The coagulation by the iron is unsightly, and he should now consider it a last resort. He had had very good results from pressure by packing sponges against the bleeding points, combined with external pressure. He withdraws the sponges at the last moment before tightening sutures, and then bandages the abdomen tightly.

Dr. GOODELL remarked that Dr. Montgomery was perfectly right in his defence of the second ovary, and he himself had performed double ovariotomy in only seventeen cases of the twenty-eight. He did not believe that every ovary studded with cysts would inevitably degenerate into an ovarian tumor. So in the case of slightly-diseased ovaries in young married women, he would be disposed either to let them alone or to remove the diseased parts only. But in women approaching the climacteric or where other conditions would make it advisable, he would remove the second ovary as useless in itself and as a possible source of future trouble. He has used the drainage-tube but three times during the past year,—once in the unfinished case of oöphorectomy, again in the case of torn bladder, and in the case requiring over thirty ligatures and with universal adhesions. In general, he uses it when a free oozing of blood is to be expected, but he regards it as a source of trouble and removes it as soon as possible.

W. H. H. GITHENS, M.D.,
Secretary.

PHILADELPHIA NEUROLOGICAL SOCIETY.

STATED MEETING, JANUARY 26, 1886.

DR. JOHN H. MUSSER presented some

NOTES IN THIRTEEN CASES OF TUBERCULAR MENINGITIS OCCURRING IN PRIVATE AND HOSPITAL PRACTICE.

Dr. WILLIAM OSLER then read a paper on

THE STRUCTURE OF CERTAIN GLIOMATA.

He desired to call attention to the histological character of certain brain-tumors which present peculiarities of structure separating them from the ordinary small-celled gliomata.

The specimens which he showed were from three cases, the features, clinical and anatomical, of which may be thus summarized:

Case I.—Girl aged 16, blind from third year; intelligent; head not large. Occasional convulsions and spasms of muscle of neck. Death sudden. Tumor occupied the surface of the left thalamus, and extended into the third ventricle. There was extensive dilatation of the lateral ventricles.

Case II.—Girl aged 15. Jacksonian epilepsy for over fourteen years. Small, firm tumor occupied the upper part of ascending convolution.

Case III.—Man aged 40. Head-pain, mental disturbance, drowsiness, the chief symptoms. Tumor the size of a lemon occupied left anterior lobe of brain.

The physical characters of these three tumors differed considerably. In Case I. the mass on the thalamus was firm, but the portion projecting into the third ventricle was soft, grayish in color, and looked like an actively-growing neoplasm. In Case II. the small tumor at the upper part of the ascending frontal convolution resembled a patch of sclerosis, while in Case III. the tumor had a large central area of fibro-caseous change, with a peripheral zone of actively-growing grayish-red tissue.

Histologically, these tumors are similar in the dense felt-work of fibres which make up the chief mass of each, the fibres varying somewhat in thickness and in closeness of arrangement. Careful observation of teased specimens shows that the fibres are, for the most part, in connection with cells, and so far the growths conform to the type of glioma. True, we do not find here the typical arrangement of small cells with delicate protoplasm and numerous fine ramifying processes which gives to many gliomata an appearance not unlike that of a small-celled sarcoma. There are gliomata, however, with larger and more irregular cells and with coarser fibres than the description in text-books would lead us to suppose, and it was more particularly to certain characters in the cells of these tumors that he wished to call attention. A study of teased fresh specimens can alone give a clear idea of the shape, size, and relations of the cell-elements.

The following varieties of cells occur in these growths:

1. The ordinary "spinnen" or spider-cell, with many processes, which may be regarded as the characteristic cell of the glioma. These present a considerable variation in size: many are not larger than colorless blood-corpuscles, others double or treble the size. The smaller have more delicate processes, which in sections of hardened specimens may not be apparent. Some of the larger of the cells look not unlike multipolar nerve-cells.

2. Large, unbranched, spindle-shaped cells, with greatly elongated processes. These re-

semble enormous connective-tissue corpuscles, and the processes may be traced until they taper to extremely fine fibrils; others are scarcely spindle-shaped, but present flat, ribbon-like processes. Some of these cells are among the largest and most remarkable met with in tumors. In Case I. the mass in the third ventricle was composed largely of them, and isolated ones measured as much as 0.4130 of a millimetre. They present usually single large nuclei, and the protoplasm of the cell is either homogeneous or finely granular. In Case III. these forms were also very abundant, but in Case II. they were not numerous.

3. Cells which resemble closely in appearance large ganglion-cells of the nerve-centres. They present a dark granular protoplasm, large nuclei, and one, two, or more processes, which either run singly or finally branch. The most remarkable looking are those with a single process springing from a balloon-shaped cell. Others have a process from each end of the cell-body. They are usually much larger than the spider-cells.

4. In Cases I. and III. there were structures of very curious aspect, which probably may be regarded as derivatives of the large fusiform-shaped corpuscles. These were remarkably translucent, band-like fibres, tapering slightly at each end, but without nucleus or granular protoplasm. From their close resemblance in form to the spindle-shaped cells, and from the fact that these latter often present a remarkable translucency, I think we may regard these peculiar fibres as resulting from a vitreous or hyaline transformation of the large spindle-cells.

These tumors conform to the variety described as neuro-glioma by Klebs, who holds that the large ganglion-like cells found as such important constituents of these growths are derived directly from the nerve-cells of the gray matter, and that in the development of this variety all the elements of the nerve-tissue participate. Certainly the resemblance between many of the large cells and nerve-elements is very striking, but I have not been able to satisfy myself of their relation to the pre-existing tissue parts. This is, of course, extremely difficult; but in a careful study of sections taken from the advancing regions of the growths I have not met with appearances which would lead me to suppose that the nerve-cells were in process of proliferation. Klebs states that he has demonstrated by means of osmic acid and gold chloride the nature of the cells and their processes; but this has not been confirmed, and I could not determine that the cells or fibres described above behaved in a characteristic manner with these reagents. That they are probably connective-tissue elements seems probable from an examination of a large number of the cells in teased preparations. Gradations and intermediate forms can be seen between cells closely resembling unipolar or bipolar nerve-ganglia and the typical spider-cells with innumerable processes. Gliomata of this form are not uncommon. Klebs described fourteen or fifteen, and, of five cerebral tumors of the glioma-type which I have met with, only two were of the small-celled variety.

Dr. WHARTON SINKLER reported

A CASE OF BRAIN-TUMOR.

Miss S., æt. 52. Mother, maternal grandfather, great-grandfather, two maternal uncles, and two brothers died of phthisis. Paternal ancestors long-lived. No cancer. Healthy and well up to four years old. Then had a serious illness, spoken of by some as "brain fever;" another person says dysentery. Seemed to recover entirely from this, and was bright, well, and agreeable. Was not very intelligent mentally, but not by any means deficient. Catamenia first appeared at eighteen years. At seventeen years friends noticed a change in her: she was irritable, cross, and peculiar about many things. This condition of things continued through the remainder of her life, all the peculiarities becoming intensified. She was a great reader and a great eater. She was fond of literary pursuits, and spent a considerable amount of time in writing and painstaking composition. She never had convulsions, as far as known. At twenty-five years she was examined as to her mental condition by Dr. William Kirkbride, and he decided that, although not mentally vigorous, she was not insane.

For five or six years before her death, say forty-five years of age, she seemed to grow stouter, less inclined to work, and in walking seemed to move slowly and with difficulty. For three or four years before her death there was a drooping of the left corner of her mouth, most noticeable in smiling or speaking. This gradually increased. For eight or ten years she had had headaches.

In the summer of 1885 she was at Atlantic City, and had two or three attacks of violent headache associated with unconsciousness. These lasted several days at a time. She came under my charge in September, 1885. She then showed slight left facial paralysis, but no loss of power in arm or leg of either side. She complained sometimes of pain in the head, sometimes in the shoulder or neck; seldom seemed to have persistent pain in one place. She had an attack of unconsciousness with severe headache; screamed with pain, but could check herself, and when asked what was the matter said she had pain, but could not state exactly where it was. At times she talked incoherently and spoke of having seen persons whom I knew she had never seen. She was unwilling to leave her bed, but, if she could be persuaded to get up, could walk about. Her appetite was good, but there were indigestion and constipation. No vomiting. Vision seemed good, but the

eye-ground was not examined. She was eccentric in her way of talking, and said many things with the evident intention of creating surprise.

At my suggestion, she was taken to a country town in the vicinity of Philadelphia, and was there under the care of Dr. J. Reeve. After reaching this place, she complained of pain in the right side of the head and seemed unable to walk; would fall into a semi-unconscious condition, which would last for some hours. The temperature became elevated, the facial paralysis became more marked; but, although no paralysis of the limbs, there was general muscular weakness. The patient died on October 26, 1885.

The post-mortem examination was made by Dr. H. Wharton. Upon exposing the membranes of the brain they were found markedly congested, and the dura mater was very adherent to the petrous portion of the temporal bone on the right side. Brain removed, membranes divided and turned aside. Upon left side there was no apparent lesion. On the right side some bulging of the membranes was apparent in the region of the fissure of Sylvius, and, upon dissecting them off, they were found very adherent to a tumor, larger than an English walnut, growing from the fissure of Sylvius about the line of the fissure of Rolando. The tumor was dead-red in color, stood out from the brain-tissue, and was dense to the touch. There was some effusion into the ventricles.

Dr. De Schweinitz made a microscopic examination of the growth, and sent me the following report: "The small portion sent for examination was hardened first in a solution composed of Müller's fluid one part, and methylic spirit three parts, for six weeks, and then in alcohol. Sections were cut, stained with carmine, and mounted in balsam. In the periphery the growth shows a structure composed of more or less perfectly developed fibrous tissue; more interiorly the stroma of the tumor is made up of numerous, variously-sized, dilated blood-vessels, sometimes empty, but for the most part filled with corpuscles. Between these are numerous small round and large spindle-cells (sarcoma-tissue) scattered through the growth, sometimes singly, often in groups; there are round, yellowish-white bodies, which are probably amyloid in their nature. The tumor may be properly classed as an *angio-sarcoma*."

The growth, as may be seen, is spherical in shape, and springs up out of the fissure of Sylvius. The points of interest in the case to me are these. First, the probable long standing of the growth. It is likely that it began at the age of eighteen years, when mental peculiarities first showed themselves. Secondly, the absence of most of the symptoms peculiar to brain-tumor. There were no convulsions, no vomiting, no defects of vision, and no pain localized in one particular spot. The facial paralysis was not noticed until three or four years before death. There were many marked hysterical symptoms which masked the true nature of the disease. These, I think, are often met with in brain-tumors in women.

(To be continued.)

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, JANUARY 25, 1886.

The President, DANIEL LEWIS, M.D., in the chair.

ON THE ADVANCED OPERATIVE TREATMENT FOR THE RADICAL CURE OF HERNIA.

DR. ROBERT ABBE, the author of the paper, showed the desirability of effecting a radical cure of troublesome herniæ, if possible, and briefly referred to operations which had from time to time been brought forward with the hope of effecting this result. Speaking of those which had been advanced prior to the recent open method and Hilton's injection-method, he said their safety had recommended them, but their failure to effect a radical cure condemned them. It would also seem that this remark might almost be applied to Hilton's method. In view of the difference in the statistics given by different authors who had practised the open method, it was desirable to place before the profession the exact histories of cases so operated upon.

Dr. Abbe then gave the history somewhat in detail of twenty-one cases in which he had practised the open method, that employed by Banks, of Liverpool, and others. There were minor points of difference in the operation as it was practised by surgeons at different places. In Liverpool, for example, it is the custom to employ silver wire in closing the inguinal ring, while others employ catgut for this purpose.

In sixteen of the cases there was not strangulation, and in a portion of the others the symptoms of strangulation were not very marked. The results of the treatment led the author to ask two questions: first, was the open operation a safe one? and, second, did it effect a radical cure? If we should judge by the statistics of Liverpool surgeons, we must admit that it was safe; but such good results had not been obtained outside of that city. Other statistics showed a death-rate of one case in eight. It was true, however, that this showed the result of treatment in the worst cases, for only such had usually undergone operation. There were dangers arising from adherent intestine, old adherent bands, incarcerated omentum, fatty heart, feeble health, etc. Again, in this operation we had to face the fact of possible hemorrhage. Banks, of Liverpool, had referred to a case of hemorrhage, which, however, recovered

after laparotomy and securing of the bleeding point. The accident had also occurred in the hands of experienced surgeons in this city. It occurred in one of the cases reported by Dr. Abbe in the manner in which he believed it usually occurred,—namely, by shrinkage of the omental tissue, which was really but a mass of fat, and loosening of the ligature. To avoid this accident he advised the use of carbolized silk, ligaturing the broad and thick mass of omental tissue three, four, or even five times, and, in addition, securing any bleeding vessels on the cut surface. Peritonitis, suppuration, and hemorrhage had been the three bugbears which had led surgeons to let the hernial sac alone. But the greatest danger from peritonitis was due to the development of erysipelas, and the occurrence of this accident was not very likely if antiseptic methods were strictly observed. Inasmuch as hemorrhage had occurred in the hands of the most careful and experienced surgeons, it might be a question whether this accident could be with certainty guarded against in all cases. The possibility of its existence was thought of in the case referred to, and laparotomy had been taken into consideration; but, inasmuch as special care was taken during the operation to guard against subsequent hemorrhage, and as the red appearance of the man's face (due to drink) seemed to weigh against its presence, this was not performed. In one of the twenty-one cases death occurred from fatty heart and intestinal obstruction brought on by the relations of the returned omental stump. It was not probable, even had laparotomy been performed, that the constricting band could have been relieved. In a third case, Dr. Abbe performed the open operation for the radical cure of hernia, and at the same sitting operated upon some varicose veins of the leg, which resulted in suppuration and death, although the hernial wound was doing well.

The author was strongly of the opinion that suppuration and union by granulation in the canal and about the ring led to a much better final result than did primary union. This was also the estimation of the granular process by English surgeons. Adhesive inflammation about the ring, excited by whatever method one might use, was delusive. The induration following Heaton's method was usually absorbed within a month. If we could bar the ring tightly and keep it barred, we might keep back pressure, but the catgut suture became absorbed within a week, and allowed the strain to come upon the soft parts too soon. The patient should support the soft parts from without many weeks, and perhaps many months, after the operation. With regard to a return of the hernia, Dr. Abbe thought it extremely probable that there would be a recurrence within a year or two. It was much less likely to follow an operation upon a femoral hernia than upon an inguinal hernia. But recurrence of the hernia was not a sign of failure of the operation, for the patient was almost always restored from complete invalidism to perfect health and ability to do his work. The sixteen unstrangulated herniæ which he had operated upon had all been unmanageable, and all of the patients expressed great satisfaction at the result of the operation.

Dr. A. G. GERSTER had performed the radical operation in twenty-five or more cases. In eight or nine there was no strangulation, but the distressing symptoms were so acute that the patients were unable to wear a truss or to attend to their affairs. The chief features of the operation as he performed it were dissection of the sac, sewing up of the neck of the sac by catgut suture in a manner resembling a purse-string, replacement of the stump of the sac, then sewing up the pillars of the external abdominal ring by several superimposed rows of sutures of catgut.

He thought the results were better in cases in which the ring had not become largely distended. Of the twenty-seven or more cases, he lost three, in each of which the condition had been such as to call for herniotomy. One patient died of necrosis of the gut, which was returned under the false impression that it was viable. Another died of follicular diphtheritic inflammation, and the third probably of septic peritonitis from necrosis of the gut, but an autopsy was not obtained to confirm the diagnosis. In all the cases in which herniotomy had not been indicated, the patients recovered without any disturbance. He therefore thought the operation was safe in the hands of one who was familiar with antiseptic methods; but he did not believe a radical cure was effected. There would be a relapse; but patients were enabled to wear a truss with comfort and to go about their usual work, whereas before they were hopeless invalids.

Dr. R. F. WEIR said that in herniæ not strangulated he had performed the operation eight times, and he thought himself justified in undertaking it in cases in which the hernia was large, perhaps irreducible, rendering a truss useless and disabling the patient for work. But Dr. Weir had seen three deaths after the open operation from hemorrhage, occurring in the practice of surgeons of experience. In two or three of his own cases the amount of suppuration and constitutional disturbance after the operation had been very considerable, and he was anxious lest peritonitis should develop. If, after the best of these operations, attended by even a moderate amount of risk, the patient was obliged to wear a light truss, he would ask, why extend the operation to those cases of reducible herniæ which could already be kept up by a light truss? Dr. Weir had not yet lost faith, in cases of mild herniæ, in Dr. Heaton's injection-method. He thought it would cure from one-third to one-half of

such cases, and he should be unwilling to adopt the open operation.

Dr. O. A. WHITE presented a modification of Wutzer's instrument for invaginating the inguinal canal and exciting adhesive inflammation of its walls in cases of hernia. His modification was made by Tiemann years ago, at a time when the slave-holders were anxious to own a sound negro instead of one who had rupture. The modified instrument had two needles, while the original had but one and was heavier than its substitute. Dr. White had used the instrument in at least forty cases, and not more than five had to be operated upon twice.

Dr. ABBE closed the discussion.

THE DIAGNOSIS OF SMALLPOX.

Dr. P. ALBERT MORROW then read a paper on this subject, the importance of which, he said, was evident from the fact that atypical and modified forms of smallpox presented many features closely resembling various eruptive diseases, and from the fact that in this city physicians were required by the Board of Health to report regarding the nature of the disease within twenty-four hours, and if a false diagnosis were made he would expose himself to a suit at law. During the period from 1880 to 1885 two thousand five hundred cases of smallpox had been admitted into the hospital. Thirty-five cases were wrongly diagnosticated as smallpox, and in eleven cases variola was diagnosticated otherwise. A much larger number of cases were sent to the reception hospital as cases of smallpox, but were not transferred, the diagnosis of smallpox having been erroneously made. During a recent period the number of cases of smallpox had been comparatively small, while the number of cases reported as smallpox was large. In at least two of these cases the mistake was made by physicians of large experience, and showed that a correct diagnosis within twenty-four hours, as required by the rules of the Board of Health, was at times impossible. The diseases for which variola had been mistaken, or which had been mistaken for variola, were varicella, varioloid, measles, scarlet fever, typhus fever, typhoid fever, syphilis, urticaria, sudamina, herpes, acne, etc. The mistake was most frequently made with regard to measles. Dr. Morrow then proceeded to point out the differential points between atypical or modified forms of variola and these diseases.

In his concluding remarks the author referred briefly to the evidence of characteristic marks of vaccination as influencing diagnosis. Clinical experience proved very conclusively, he said, that vaccination, no matter how efficiently or recently performed, did not always prevent smallpox. In some cases it did not materially mitigate the severity of the eruption. On the other hand, it was well to remember that, exceptionally, a mild modified form of smallpox might occur in persons who had never been vaccinated. The absence of all marks of vaccination, no matter how mild the symptoms, did not necessarily exclude variola. An attack of smallpox did not necessarily diminish susceptibility to vaccination.

The paper was discussed by Drs. McLaury, Sell, Weinberg, Judson, Mittendorf, Abbe, and the author.

Dr. MORROW was elected delegate to the State Medical Society, to fill the vacancy left by the resignation of Dr. Alexander.

Dr. GOUVERNEUR M. SMITH read a report from the Committee on Contagious Eye-Disease, which was accepted and its recommendations adopted.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held February 4, 1886, the President, A. JACOBI, M.D., in the chair.

THE INTRA-CEREBRAL TRACTS: THEIR PHYSIOLOGY, AND ITS BEARING UPON THE DIAGNOSIS OF LESIONS OF THE CENTRUM SEMI-OVALE.

Dr. M. ALLEN STARR, in his paper, said that such authorities as Nothnagel, Charcot, and Strümpell admit that few rules for guidance could be given, and that at present there are no definite symptoms assigned to diseases of the centrum semi-ovale. But the subject of lesions of this part of the brain has an immediate practical bearing, for in the journals during the past year there were recorded several cases of operations for the evacuation of cerebral abscesses and the excision of tumors. But the surgeon is dependent upon the neurologist to tell him where to operate, and we know that tumors and abscesses, the legitimate field for operation, lie chiefly in the centrum semi-ovale. The inductive method has not been so satisfactory here in making a diagnosis as in lesions of the cortical substance. Lesions of the centrum ovale are not very common, and consequently are not often suspected during life. There are also many symptoms in each case which must be searched for by the examiner, as they are of a nature to elude the notice of the patient, such as disturbance of the temperature-sense, of vaso-motor activity, of exact limitation of the visual field, etc. Dr. Starr showed the importance of a knowledge of the anatomy of the intra-cerebral tracts, and described the three sets of nerve-fibres composing it,—namely, the projection, the commissural, and the association systems,—and also gave the prevalent views of their physiology.

With regard to the association fibres, Dr. Starr said he would suggest, without going very deeply into the subject of psychology, that they form the physical basis for the association of concrete memories. They are necessary to the union of different memories

in a whole, to the formation of a concrete idea. He did not allude to processes of reasoning. Having, then, a knowledge of the anatomy and physiology of the association fibres of the centrum ovale, we also have a set of symptoms referable to their destruction. But intelligent questioning of the patient is necessary in order to learn what those symptoms were. For instance, in the case of the fibres associating the auditory with the motor speech-areas, the symptoms to be elicited seem to be very simple. Could the patient talk correctly? Could he repeat at once a word spoken to him? These were questions which any one would ask who examined a case of aphasia. But this was not sufficient. Could the patient read understandingly to himself and tell what he had read? This would test the occipito-temporal tract. Could he read aloud? This would test the occipito-temporo-frontal tract. Could he write what he saw? This would test his occipito-central tract. Could he write what he heard? This would test the temporo-central tract. Could he write what he spoke to himself in a whisper? This would test his fronto-central tract, etc.

Dr. Starr thought it would be evident that a lesion of the centrum ovale might give rise to three sets of symptoms, referable to projection, commissural, and association fibres. The important fact would at once be evident that these symptoms must be associated in any given case, and it was upon the fact of such association of symptoms that the diagnosis of lesions of the centrum ovale must depend. Monoplegia alone might be caused by disease of the cortex or of the centrum ovale, hemiplegia by capsular or centrum ovale disease. But if in either case it was the centrum ovale which was affected, there would be in addition to the paralysis a suspension of action of commissural and association fibres. The commissural fibres being destroyed, simultaneous bilateral symmetrical motions would be suspended. The association fibres being destroyed, certain mental associations would be affected. For example, a lesion in the centrum ovale of the occipito-temporal region would produce hemianopsia, because it would involve the visual tract of the projection system. It might also produce a peculiar mental condition known as word-blindness, in which the patient was no longer able to associate a word or letter seen with its corresponding sound, or with the motion necessary to write it. Charcot has reported such a case which Dr. Starr, who had seen the patient with him, gave in detail.

Dr. Starr said that in all cases of obscure brain-disease we should examine all the functions of which we have any knowledge, trusting to the future to explain peculiar symptoms. It seemed to him that the way to solve the problem was to reason from anatomy and physiology to the probable results of lesions in the centrum ovale, and then in every case to examine for the symptoms which theoretically might occur. In this way no latent symptoms would be overlooked, and after a time we might have many new symptoms now unsuspected, which, in connection with lesions found at post-mortem examination, would warrant the formulation of certain diagnostic signs of disease of the centrum ovale.

PERMANENT DRAINAGE IN ASCITES.

Dr. AUG. G. CAILLÉ related the histories of two cases.

About four years ago he saw an elderly gentleman suffering from cirrhosis of the liver, in whom the symptoms depending upon ascites were so marked as urgently to demand tapping and repetition of the operation. He was tapped nine times in the course of seven months, a pailful of serum being removed each time. Before the tenth operation Dr. Caillé determined to attempt permanent drainage, although the danger of exciting a peritonitis or other serious complication was fully appreciated. An incision an inch in length was made in the median line half-way between the umbilicus and symphysis pubis, a trocar and canula introduced, the trocar withdrawn, and a rubber tube inserted. After withdrawal of the fluid the tube was allowed to remain, iodoform being put upon the dressing at the mouth of the tube, and the fluid allowed to drain and be absorbed by towels. Some eczema developed under the dressing, which disappeared under suitable management. After drainage had been established the œdema disappeared rapidly, the heart-action improved, the breathing was freer, the troublesome cough disappeared, the bowels became regular, the appetite improved, and the patient became able to go about, wearing all the while the tube. The rubber canula remained *in situ* about nine weeks, when it was removed, and at the end of another four weeks the opening closed. The patient was able to be about his duties for nine months, there being no return of the œdema or of the ascites. After nine months his strength began to fail, and he finally died of heart-failure. Two weeks before death there was a return of slight œdema of the ankles. At the autopsy cirrhosis of the liver and fatty heart were found. Careful inspection of the peritoneum at the seat of puncture revealed no evidence of inflammation.

The second case was similar, and in addition there was marked purpura hæmorrhagica, epistaxis, bleeding gums. The patient had no appetite, and was unable to sleep. He was treated as was the other patient,—in this case a rubber tube being employed to conduct the drainage from the rubber canula to a bucket by the bed containing a carbolic solution. The tube was worn for seven weeks. The ascites and œdema disappeared. The appetite improved. There was, in short,

improvement in all the symptoms. The patient was able to pass ten weeks with his family in the Catskills, and continued to live a comfortable existence until the spring of 1885, when he died suddenly, as was supposed of heart-failure, when attempting to get out of bed. There was no return of the ascites. An autopsy was not allowed.

In his general remarks Dr. Caillé considered four questions:

1. What are the symptoms and dangerous mechanical effects of ascites?

2. How is the collateral circulation established in cirrhosis of the liver?

3. Will the absence of intra-abdominal pressure or pressure from ascites promote collateral circulation and functional activity of important organs, and thereby prolong life and add to the comfort of the patient?

4. How is drainage best accomplished?

After considering these questions, the author said he was inclined to believe from this limited experience that we need not fear peritonitis so much when ascites is present as under other circumstances. Too much importance, however, should not be attached to these two cases, for the number was too small to judge from them of the value of this procedure. It was the author's opinion, however, that it should be given a trial in cases of ascites which required two or more tappings for reaccumulation of fluid.

The PRESIDENT said it appeared to him that what Dr. Caillé had done in these two cases was what might have occurred spontaneously. Probably some of the gentlemen present had seen cases of extreme ascites in which spontaneous rupture of the abdominal walls had taken place. He had seen some such cases. The place of rupture was usually in the median line, particularly at the umbilicus. In such cases there was, of course, a permanent fistula established, and, instead of allowing it to occur at a spot which was not convenient or pleasant, he thought it was better for the surgeon to make the opening where he wished it should be established. There was such a case in the German Hospital the past year,—that of a heavy German, in whom spontaneous rupture took place at the umbilicus, allowing of the escape of the ascitic fluid. It healed and reopened several times in the course of a few months. The patient felt so well satisfied with his condition that he left the hospital, but naturally the shrinking liver and swelling spleen still remained.

The President then described a case of encysted ascitic fluid which occurred in his ward in the Bellevue Hospital last year, in which the physical signs were almost exactly those seen in a patient over twenty years ago. In the case seen long ago he made the diagnosis of ovarian tumor, and, although post-mortem examination proved his error, he still thought that the diagnosis of ovarian cyst was the only one justified by the signs during life. He had this case in mind when contemplating an operation upon the patient in Bellevue Hospital, yet the signs were so plainly those of an ovarian cyst that an incision was made, when it was found that the fluid was ascitic, limited by adhesions. Permanent drainage was then established for a time, and the patient improved and left the hospital. He had since heard that the fluid had reaccumulated. There was a family history of tuberculosis, and it was probable she had tubercular peritonitis.

Since learning of Dr. Caillé's operation, Dr. Jacobi had performed it upon a man suffering from cirrhosis of the liver, with jaundice, purpura, epistaxis, loss of strength, ascites, dyspnœa, etc. As his strength was constantly diminishing, and the symptoms demanded relief, he established permanent drainage midway between the umbilicus and urinary bladder in the manner described by Dr. Caillé, leaving the tube in several weeks,—until the patient's death, for he had been dying for some time. The canula was obstructed by wax during the night, drainage being continued only during the day. The patient felt relieved. Post-mortem examination revealed no peritonitis. Dr. Jacobi thought the operation of Dr. Caillé a good one, and he would repeat it whenever a suitable case came under his observation.

The question of medicinal treatment of cirrhosis of the liver having been raised, the President said that small doses of corrosive sublimate, long continued, were beneficial in all forms of interstitial inflammation, whether in the form of a myelitis, a nephritis, or a hepatitis. Of course when the disease was advanced its progress could not be stopped, but when only a portion of an organ was involved this treatment might enable us to prolong the patient's life indefinitely.

Dr. LINDLEY said that in South Africa the Dutch settlers used honey as a popular remedy in cirrhosis of the liver. In one case in which he had resorted to tapping for accumulation of fluid in the peritoneal cavity, a woman advised the use of this article. The man took a pint of liquid honey daily, and recovered.

Dr. SHERMAN suggested that there might have been medicinal properties from the flowers in the honey.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held January 27, 1886, the President, JOHN A. WYETH, M.D., in the chair.

INTESTINAL VOLVULUS.

Dr. R. VAN SANTVOORD presented specimens from a case of volvulus of the sigmoid flexure. The patient, a male, aged 45 years, had for thirteen years been an inmate of the

Randall's Island Pavilion for the Insane. Being demented, he was unable to give an account of his condition. On June 30, 1885, the house-physician noticed that he walked in a bent position and went frequently to the water-closet. The abdomen became largely distended, and on the fourth and fifth days cathartics were given, but without effect. There was no vomiting. Dr. Van Santvoord saw the patient for the first time a day or two afterwards. Twenty feet of tubing were introduced into the gut, and an injection made of warm water; but on withdrawing the tube none of the water escaped. Before reaching a diagnosis, a hypodermic needle was introduced through the abdominal wall, and a large amount of gas escaped. This fact seemed to point to distention of the colon rather than of the small intestine. Tenesmus indicated volvulus of the sigmoid flexure. Ability to pass the tube beyond the obstruction pointed to a slight twist of the gut, which recurred on withdrawing the tube, preventing escape of the fluid injected. The subacute character of the symptoms indicated obstruction rather than strangulation.

Nine days after attention had been called to the patient's condition, laparotomy was performed under antiseptic precautions. The incision extended from just below the umbilicus, in the median line, a distance of four inches. After the abdomen had been opened, the gut being greatly distended with gas, the aspirator-needle was introduced in an oblique direction, allowing much of the gas to escape. Then, on introducing the hand, the sigmoid flexure was found to have made half a twist on its axis. Reduction was easy. It was thought best not to suture the opening made by the hypodermic needle, and through which some gas had escaped after its withdrawal. A copious flow of fluid fæces took place through the rectum before the abdominal wound was closed. For three days the patient did fairly well, having several loose passages each day, and the abdomen became sunken. On the fourth day the temperature went up, the patient began to lose strength, and the abdomen became distended, but no other abdominal symptoms were manifest. Death from exhaustion took place on the sixth day after the operation. The autopsy revealed pneumonia. The peritoneum was firmly closed at the site of the incision, and there was no sign of inflammation about the wound except a few drops of pus in the line of a continued suture. The colon was much distended. There had been no recurrence of the twist in the gut, which had occurred at two points of narrowing in the sigmoid flexure, the distended portion of gut lying between the narrowed points having been thrown over forward from right to left, making half a twist. The peritoneum at a point where the colon was greatly distended had ruptured. There were no signs of acute peritonitis. At the point where the puncture had been made there was some brown pigment, but the opening had closed completely.

ELONGATION OF THE SIGMOID FLEXURE THE CAUSE OF MARKED TYMPANITES.

Dr. L. Emmet Holt presented specimens which were interesting in connection with the case related by Dr. Van Santvoord. They consisted of the intestines removed from the body of a child which had been under his observation for three months. The child died recently, after an illness of three days, from an acute disease. The point of interest in the case was the fact that the child had had attacks of tympanites which lasted sometimes a week, and so marked that respiration was interfered with. At times the tympanites would disappear almost entirely, and at other times it was much relieved by the introduction of a tube into the rectum, when much gas would escape. The bowels were free, and there were no symptoms pointing to intestinal obstruction. There was a family history of tuberculosis, and for this reason it was thought possible there might be tubercular peritonitis. It appeared from the autopsy that the cause of the troublesome tympanites had been a great elongation of the sigmoid portion of the colon, which was reflected upward so as almost completely to cover the abdominal viscera. This abnormality was thought to be congenital. There was no real obstruction, and no distention with fæces. The mesenteric attachment of the gut was very long. There was no peritonitis.

The President thought surgical interference should be resorted to early in all cases of intestinal obstruction. We should not wait twenty-four hours even for the clearing up of the diagnosis when there were strong suspicions of intestinal obstruction. The exploratory operation would not be in itself a dangerous procedure, and in the large majority of cases it would enable us to discover the cause of the obstruction and to remove it. With regard to puncture for the relief of intestinal distention with gas, he had resorted to it in several hopeless cases for the purpose of relieving pain, and he had always found at autopsy that the holes remained patent, so that gas could escape through them. He recalled one case in this city in which multiple punctures were resorted to during an operation to allow the escape of gas from the overdistended gut, and the patient recovered.

Dr. Carpenter related an anecdote in which it appeared that the late Dr. Parker during a lecture cautioned the students not to resort to puncture to allow of the escape of gas from an overdistended gut. The late Dr. Stephens, entering the hall a few minutes later, was asked if he had any remarks to make. He said, pointing to a diagram hanging upon the wall, that a very embarrassing situation for an operator to be placed in was

to have a large coil of intestine protruding from the abdominal wound during an operation for strangulated hernia. There was no more satisfactory way to relieve this, he said, than to take a fine cambric needle and gently puncture the intestine, and no harm would come from it. Thus two eminent surgeons entertained entirely opposite views regarding the management of the same condition. Dr. Carpenter added that there are a sufficient number of unfavorable cases on record to put one upon his guard against indiscriminately resorting to puncture of the intestine.

Dr. J. LEWIS SMITH had seen satisfactory results from injections of large quantities of warm water into the bowel, the pelvis being raised and the abdomen kneaded during the injection. In one case he succeeded in reducing the obstruction after it had existed three days. He had no doubt, however, that many lives might be saved by an early operation, as Dr. Wyeth had recommended.

Dr. VAN SANTVOORD remarked that, according to the statistics, the mortality from intestinal obstruction is great; but they are probably more or less misleading, as they represent severe or prolonged cases. He thought it probable that a number of cases of obstruction or volvulus occurred which recovered before the symptoms became very marked, and which consequently were not reported. He thought he had seen several cases of that kind. The surgeon principally sees severe cases, such as enter the hospitals, and he is likely to base his opinion as to the importance of an operation upon such cases.

The PRESIDENT was still of the opinion that if, in all cases in which the symptoms were fairly indicative of intestinal obstruction, an early operation were performed, the percentage of mortality would be reduced.

REVIEWS AND BOOK NOTICES.

A PRACTICAL TREATISE ON MASSAGE: its History, Mode of Application and Effects, Indications and Contra-Indications. With Results in over Fourteen Hundred Cases. By DOUGLAS GRAHAM, M.D. New York, William Wood & Co. Cloth, 8vo, pp. 286.

The popularity of the treatment advocated by Weir Mitchell, in which passive exercise and massage occupy such a prominent position, has led to a general desire for more information as to the requirements of massage in order to secure its intelligent and scientific application. Dr. Graham, who has for years identified himself with this subject by his contributions to the medical press, has therefore rendered a real service to the cause of scientific medicine by publishing the only systematic work upon this subject in the English language, so far as we are aware. In sixteen chapters he considers the history, technique, and therapeutic applications of massage to diseases of special organs, as well as to disorders of the nervous and muscular systems. The influence of massage upon assimilation is best demonstrated in the treatment of neurasthenia, locomotor ataxia, chorea, writer's cramp, and other neuroses connected with or dependent upon impaired nutrition.

We have deferred noticing this book, indeed unduly, until time was afforded for a thorough examination, and we can say, after perusal, that it abounds in information upon a subject which modern medicine has treated with strange neglect. No one can rise from reading this work of Dr. Graham's without having increased confidence in restorative medicine or feeling that he has enlarged his own powers in the treatment of disease.

THE PRINCIPLES AND PRACTICE OF MEDICINE. By the late CHARLES HILTON FAGGE, M.D., F.R.C.P. Vol. II. P. Blakiston, Son & Co., Philadelphia, 1886. Royal 8vo, pp. 883.

The second volume of this great work contains sections on Diseases of the Heart and Blood-Vessels, Diseases of the Alimentary Tract, Diseases of the Liver, Affections of the Urinary Organs, General Diseases affecting the Joints, Diseases of the Bones, and Diseases of the Blood. It concludes with an excellent systematic consideration of diseases of the skin, by P. H. Pye-Smith, M.D. Full subject and author indexes are given, and to the work is appended a brief Memoir of the Author, whose early death was a deep loss to medicine.

The amount of erudition, clinical observation, and pathological investigation which are shown by the pages of this work is surprising, and indicates a mind of rare gifts, accompanied by untiring industry and zeal for the acquisition of facts. In Bacon's classification this work would come under the caption of books which are to be taken in and digested. A brief notice only fails to do it justice. As it is, it forms an enduring monument to the memory of a talented, industrious physician, who served his generation well.

NEW REMEDIES AND CLINICAL NOTES.

SOME USES OF FRIEDRICHSHALL WATER. —Lauder Brunton, Professor of Therapeutics at St. Bartholomew's Hospital, London (*The Practitioner*), says, "The therapeutical range of Friedrichshall is highly esteemed by the leading German physicians: Mosler and Thierfelder find it of great service in habitual constipation and various digestive liver-affec-

tions; Scanzoni in the constipation of pregnant women; Schröder and Veit in uterine congestions and inflammation, and especially in chronic metritis; Weber in catarrh of the bladder; and Sir Henry Thompson in the prevention of calculous disease and the prophylactic treatment of gravel. Löschner, Helft, and Mosler speak highly of its use, combined with suitable exercise and diet, in the torpid forms of struma, and in scrofulous children. The opinion of these authorities is likely to reinstate Friedrichshall as a favorite laxative."

Antiseptic Gauze for Surgical Dressings.—Dr. R. F. Weir, at the last meeting of the Surgical Society of New York, recommended the following as a decided improvement over Billroth's composition for applying to gauze: resin, ten parts; castor oil, six parts; alcohol, fifteen parts; iodoform, five parts.

The Ubiquitous Bacillus.—Dr. G. Puerta (*El Siglo Médico*) claims to have detected a comma-shaped bacillus in laudanum: so that clinicians who depend upon their microscopes for their ability to detect cholera will be under the necessity hereafter of examining their medicine, if it contains laudanum. And if the medicine, why not examine with equal care all the food and drink?

MISCELLANY.

Oleomargarine.—The subject of the adulteration of food-products is one of growing importance, which is now coming prominently before the various State Legislatures. The manufacture of oleomargarine is one of the greatest of these grievances, and the report of the Dairy Commissioner of the State of New York, just presented to the Legislature, is therefore an interesting document. The highest court of New York, it will be remembered, recently decided that the absolute prohibition of the manufacture of oleomargarine was unconstitutional; yet vigorous efforts have been made all through New York to prevent the compound being sold for genuine butter. This result, the Dairy Commissioner says, has been largely accomplished. Nevertheless, one of the leading papers of the State has this account to give of the present condition of the traffic: "Oleomargarine is a greater enemy to the farmers, and through them is doing more injury to our prosperity, than is generally imagined. The figures of the growth and sale of this bogus butter are truly alarming. In 1880 the country exported 39,236,655 pounds of butter and 20,000,000 pounds of oleomargarine; but in 1885 the exports of oleomargarine nearly reached 38,000,000, while the exportation of butter declined to 21,638,128. Fifty million pounds is the present magnitude of the manufacture of the bogus article, out of which dishonest men are evidently making enormous fortunes. The law prohibits the fraudulent sale of the imitation product; but it nevertheless goes on, despite the exertions of the authorities to prevent it: the claim, indeed, is made that the law is so full of loopholes that it is almost impossible to secure a conviction under it. The perpetuation of the valuable dairy interests of this State can only be secured by the most complete protection in this particular that can be given them, and the present Legislature can undertake no more important service than is involved in filling the gaps in oleomargarine legislation."

A Question of Expert Testimony.—One of the Illinois courts has recently had before it the question whether a physician could refuse to answer inquiries about matters where he was interested until his fee had been paid. The physician, it seems, had been called to attend a person who had been injured in a fight (struck with a policeman's billy), and, the affray afterwards coming before the courts, the physician was called to testify in regard to the condition in which he found the man. He testified without any objection on his part as to the patient's physical condition, and was then shown a policeman's "billy" and asked if a blow struck with it on the head would not be likely to produce upon a person a condition similar to that in which he found the patient. The physician then asked the court whether the question did not call for a professional opinion, and, being answered affirmatively, declined to answer until he had been paid his fee of ten dollars.

The court directed him to answer; but, as he persisted in a refusal, he was fined for contempt of court. This action was appealed from by the physician; but the higher court affirmed the ruling. It was held that, the physician having voluntarily spoken about the condition of the patient, he could not arbitrarily refuse to answer questions naturally connected with his previous testimony. The interesting point whether he could at the outset have refused to answer all questions until he had been paid does not seem to have been decided.

Resurrectionists for Revenue Only.—The Paris papers state that the authorities have been endeavoring for a long time to capture a gang of robbers who have been violating the graves in the cemetery of St.-Ouen-sur-Seine. The robbers eluded the guard until a few days since, when two of them were arrested while stripping jewels from a corpse which they had taken from a grave.

The custom of placing jewelry upon dead

bodies is not a very common one in this country, and the offence of grave-robbing, whenever it is committed, is usually for purposes of dissection or to secure a reward for the return of the corpse, and not to secure buried jewels.

COD-LIVER OIL EMULSION WITH HYPOPHOSPHITES.—The profession is under obligation to manufacturing pharmacists for a palatable preparation of cod-liver oil, in which the nauseating taste and disagreeable effects upon gastric digestion of the pure oil are obviated by administering it in the form of an emulsion. The especial preparation furnished by Messrs. Scott & Bowne has been before the profession for a number of years, and is largely used both in this country and in Europe. It is readily taken by delicate patients, and affords to rachitic or poorly-developed children condensed food in an easily assimilable form.

GOOD ADVICE TO LITIGANTS.—The Court of Errors and Appeals at Trenton, New Jersey, recently advised two litigants to settle their differences out of court. The parties, it seems, had been partners in a drug-business carried on in the city of Newark, and on the dissolution of the copartnership they could not agree as to the division of the firm-property. The ownership of a strip of land back of the store was the bone of contention between them, and they had been fighting for ten years when the court gave them the good advice mentioned. The land was worth about one thousand dollars; but the long litigation had cost the two men many times this amount.

UNWHOLESOME MEAT.—The local Board of Health of New Haven, Connecticut, has had its attention called to a violation of the law by a farmer living at Bethany, a town not far from New Haven. The latter had, it seems, a cow afflicted with a cancer and a tumor, according to the statement made public; yet he sold the animal to a butcher, who slaughtered the cow and used the meat for sausages. This coming to the knowledge of the Board of Health, the farmer was arrested and will have to stand a trial.

THE MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.—This body will hold its thirty-seventh annual session in the city of Williamsport, June 2, 3, and 4. The programme must be distributed at least one month prior to the meeting: therefore those who desire to present papers are requested to forward the title and a brief abstract of the subject-matter at an early day to the Chairman of Committee of Arrangements, Dr. T. H. Hillsby, Williamsport.

No voluntary paper is allowed to occupy more than twenty minutes in reading.

WM. B. ATKINSON, M.D.,
Permanent Secretary.

NOTES AND QUERIES.

PARTURITION IN THE NEGRO RACE.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

A letter by A. H. in the number for January 9 of your esteemed journal, on "Parturition in the Negro," induces me to call the attention of your correspondent to an elaborate article in the *American Journal of Obstetrics*, vol. viii. (1875–76), by Dr. J. Taber Johnson, of Washington, D.C., on the same subject, which was written at my request, with a view to eliciting whether there really are differences between the negro and white races in the matter of parturition in favor of the former.

In this paper it was shown that while negro women do to a certain extent suffer from the accidents of parturition by which their white sisters are to a much greater degree afflicted, still a peculiar round shape of the pelvic cavity in the negro female and a corresponding limited development of the fœtal cranium in the same race do render parturition, as a general thing, more easy in the negro than in the white race.

Very truly yours,
PAUL F. MUNDÉ, M.D.
30 WEST FORTY-FIFTH STREET, NEW YORK,
January 27, 1886.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JANUARY 31, 1886, *TO FEBRUARY* 13, 1886.

MAJOR HENRY R. TILTON, SURGEON (Fort Wayne, Michigan).—Granted leave of absence for two months, to commence on or about March 1, 1886. S. O. 8, Division of the Atlantic, February 9, 1886.

MAJOR H. E. BROWN, SURGEON.—Granted leave of absence for six months, on surgeon's certificate of disability, with permission to leave the Department of the Missouri. S. O. 29, A. G. O., February 4, 1886.

MAJOR RICHARD S. VICKERY, SURGEON.—Assigned to duty in connection with the Army and Navy Hospital at Hot Springs, Arkansas. S. O. 24, A. G. O., January 29, 1886.

CAPTAIN R. K. WHITE, ASSISTANT-SURGEON.—Granted two months' leave of absence, to take effect when his department commander may think proper. S. O. 29, A. G. O., February 4, 1886.

CAPTAIN WILLIAM C. SHANNON, ASSISTANT-SURGEON.—Ordered for duty at Fort Warren, Massachusetts, relieving Assistant-Surgeon John M. Banister, who will return to his proper station (Fort Adams, Rhode Island). S. O. 27, Department of the East, February 6, 1886.

FIRST-LIEUTENANT GUY L. EDIS, ASSISTANT-SURGEON.—Ordered for field duty in New Mexico, with troop "K," Eighth Cavalry. S. O. 23, Division of Missouri, February 8, 1886.

FIRST-LIEUTENANT A. R. CHAPIN, ASSISTANT-SURGEON.—Relieved from temporary duty at Fort Robinson, Nebraska, and ordered to rejoin his proper station, Fort Laramie, Wyoming. S. O. 11, Department of the Platte, February 2, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM JANUARY 31, 1886, *TO FEBRUARY* 13, 1886.

SURGEON H. J. BABIN.—Ordered to U. S. Steamship "Vandalia."

SURGEON W. S. DIXON.—Ordered to Marine Rendezvous, New York City, to relieve Surgeon Babin.

PASSED ASSISTANT-SURGEON ROBERT WHITING.—Ordered to U. S. Steamship "Vandalia."

PASSED ASSISTANT-SURGEON M. H. CRAWFORD.—Detached from the "Shenandoah" on the 8th instant; wait orders.

ASSISTANT-SURGEON C. W. RUSH.—Detached from the "New Hampshire" on the 15th instant, and ordered to U. S. Receiving-Ship "Franklin."

PHILADELPHIA, MARCH 6, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE ON HEREDITARY SYPHILIS.

BY JOHN M. KEATING, M.D.,

Visiting Obstetrician to Philadelphia Hospital, and Lecturer on Diseases of Women and Children, etc.

Reported by WILLIAM A. EDWARDS, M.D., Instructor in Clinical Medicine, University of Pennsylvania; Medical Registrar Philadelphia Hospital.

GENTLEMEN,—At our last meeting we traced the life-history of a syphilitic babe from birth up to the twelfth or eighteenth month.

We have seen that our little patient was probably born with coryza and snuffles, the subject of various skin-eruptions, as the roseolous, papular, and pustular, and with mucous patches on the tongue, lips, and cheeks. We have also seen that the child has a peculiarly old, wizened, senile aspect, with a harsh, unpleasant cry or cough. The child has also exhibited a tendency to marasmus. It is at this time that most syphilitic babes succumb to their inherited diathesis; but, should they survive, a period of latency will commence, extending for a variable period, possibly to puberty or even later. If the disease is to become active, the earlier secondary symptoms are those referable to the special organs and tissues.

Syphilitic ear-affections are frequently met with,—not, however, usually discovered until the child is of an age to appreciate the loss of function. The hepatic structure may be invaded by the disease, shown by an increase in size and weight due to a proliferation of the connective tissue, producing a new fibrous growth and a general hardening. As a consequence, its secretion is markedly impaired. This syphilitic cirrhosis may be the only hepatic symptom that your little patient will present. It is among the most frequent manifestations of hereditary syphilis. You may meet a case of gummatous hepatitis, and in the liver you may find many minute nodules along the fibrous divisions, or you may note but a few large circumscribed tumors. These gummata may be found at birth or at about the tenth or twelfth year, generally the latter. The symptoms of syphilitic hepatitis, especially in an infant, are apt to be masked by the evidences of peritoneal irritation, or even of peritonitis, which may accompany it. The principal symptom would be increase in size of the organ and alterations in the performance of its functions.

An observer of acknowledged worth makes the following remarks in regard to syphilitic hepatitis: "The symptoms are null, or they are identical with those of local and general troubles so often observed in children who have poor or insufficient nourishment. The only physical sign which properly belongs to hepatic syphilis is, when it exists at all, increase in the size of the liver."

Diseases of the osseous system constitute a frequent and important manifestation of the syphilitic diathesis. Taylor's conclusions are about as follows. In the first stage we have a simple hyperplasia of the cells, with irregular deposition of lime salts; in the second, an intensification of this condition; and in the third, a new element, — namely, the abnormal proliferation of all the elements of the tissues, with an infiltration of granulation-tissue into the medullary spaces following the vessels."

The junction of the epiphyses and diaphyses are most affected, as it is here that the growing bone has its most active growth. The bone may be affected before the birth of the child, and the patient will probably be born with a swelling around or in the joint of one of the long bones.

The bones do not seem all to be equally liable to this syphilitic invasion. Those most frequently invaded are probably the radius, ulna, tibia, and femur. Several bones may be affected at one and the same time.

The swelling surrounds the bone and is regular in outline; synovitis may coexist. The process may be arrested in any of its stages; but, of course, if it has gone on to degenerative changes in the bones and cartilages, deformity will be present. Again, when there is no absorption of the new growth, an abscess may result, the bone necrose, and your patient succumb to the prolonged drain on his system. Rarely are the cranial bones involved; when so, the process seldom goes on to abscess-formation and bone-necrosis, but generally is arrested with the osteophytic

formation that you sometimes see on the heads of older children.

Just here I must warn you so that you may be on your guard, so as not to mistake the bone-changes of rachitis for those of syphilis. The differential diagnosis is not always an easy one, and much difference of opinion exists as to their relation. Some authorities consider syphilis as a cause of rachitis. In the case of rachitis, most careful investigation will not elicit any syphilitic prodromes; but you will discover a history of progressive loss of strength, excessive sweating,—as Sir J. Paget tells us, particularly about the head, —diarrhœa and gastro-intestinal disorders, which will make up a picture totally different from that which the syphilitic case will present. Again, the rachitic subject will present you a head the fontanels of which long remain open; the cranial bones will be thickened. Application of the therapeutic test will convince you that specific treatment is of no avail. This hospital almost always has several little patients who well illustrate syphilitic dactylitis, which always produces such marked alterations in the part affected. You may meet with one or two forms, one involving the periosteum and the tissues surrounding a joint, usually the smaller joints, as the fingers or the toes; is almost painless, slow in growth; causes swelling and discoloration of the affected part. The other form is an osteomyelitis with periostitis, and may destroy the part involved. The first variety rarely destroys the tissues invaded, but simply destroys their use for a short time. You may mistake syphilitic dactylitis for various non-specific affections, as paronychia, gout, rheumatoid arthritis, or even for enchondroma or bony exostosis.

The teeth present us interesting studies in hereditary syphilis, more especially as they bear so much on the diagnosis. It is impossible to consider this subject without mentioning Mr. Hutchinson. Indeed, the teeth are sometimes designated by his name. He considers that by far the most reliable among the objective symptoms is the state of the permanent teeth, if the patient be of an age to show them. The temporary teeth do not show such characteristic lesions, and Mr. Hutchinson does not consider that they present any diagnostic points worthy of general reliance. The central upper incisors of the second set are the "test teeth."

"In syphilitic patients, these teeth are usually short and narrow, with a broad vertical notch in their edges, and their corners rounded off. Horizontal notches or furrows are often seen, but they, as a rule, have nothing to do with syphilis." These, gentlemen, are about the words of Mr. Hutchinson, and I consider them of much importance to you as a valuable diagnostic aid.

The cause of these peculiar teeth is still an open question. Mr. Hutchinson is of the opinion that they are due to an arrest in the development of the central portion of the dentine.

Hereditary syphilis may show itself in enlargements of the spleen and liver. Indeed, the spleen seems to be somewhat enlarged in most cases of inherited syphilis at an early date. In many cases the spleen decreases in size as the child grows older, until eventually it is difficult to elicit any evidence of increase in splenic dulness. It would be rare indeed to meet a new growth in the spleen; the process is one of hyperæmia

Enlargement of the liver is generally present, although it is much more apt to resume its normal size than the spleen. Do not forget that the liver is proportionately larger in early life than in an adult. So many causes may operate in enlarging the liver that it is of doubtful diagnostic value.

The pancreas is so inaccessible to the art of physical diagnosis that our clinical knowledge of its diseases is somewhat hazy. A competent observer has noted the fact that in syphilitic fœtuses the gland may be enlarged, presenting proliferation of the connective tissue, which may and generally does cause compression and atrophy and fatty degeneration of the epithelium of the lobules.

Syphilitic disease of the lungs is a point of most engrossing interest. Children may have gummata deposited in the lungs, along the blood-vessel walls and the bronchioles,—usually about half a dozen, and confined to one lung,—or the bronchial glands posteriorly at the root may become enlarged and jeopardize life by pressure. Syphilitic phthisis may develop from a fibro-nuclear growth in the alveolar wall and around the smaller bronchi and pulmonary vessels. It is in this interstitial process upon the bronchial tubes that syphilitic phthisis differs from non-specific

phthisis. The symptoms are difficult to interpret correctly; they are very insidious and gradual in their onset. You may meet with a case of syphilitic pneumonia. You will then find the parenchyma in a state of lobular hepatization, or an entire lobe may be invaded. The part affected is dense and hard, the pulmonary pleura is inflamed and thickened. Cornil describes the process about as follows: the interlobular connective tissue enters into proliferation and presents a large quantity of embryonal cells, the alveolar walls are thick, while the narrow alveoli are livid, and even filled by epithelial cells, which are of the pavement-form in contact with the walls, round in the centre of the alveoli. As the process progresses, the epithelial cells become fatty, degenerated, and subsequently broken down and absorbed, while the embryonal interalveolar tissue rapidly organizes into fibrous tissue. Thus results a small fibrous tumor in which a gumma may develop.

The kidneys may be included in the general syphilitic taint. Bright's disease has been noted to arise coincidently with the outbreak of a well-marked syphilitic eruption. Gumma have been seen in the kidneys of children, or, again, you may find the organ fatty, enlarged, or having undergone degeneration.

The eye-symptoms of congenital syphilis are extremely interesting to the ophthalmologist. Interstitial keratitis will perhaps be the manifestation of the disease that you will most frequently note. Both eyes are generally affected, but one is usually involved first, the other taking part in the process some weeks later. The corneæ may be rendered very opaque, so that the little patient will be barely able to recognize day from night. These opacities will generally in time become absorbed, so that a fair measure of sight may be regained, though in most cases there will always remain some dimness of vision.

Involvement of the nervous system in the syphilitic process may be indicated in many ways,—either by a sudden paralytic seizure due to a rupture of some vessel in the cerebral circulation from specific degeneration of its coats, or the more slow symptomatology of brain-tumor due to a gummatous deposition made manifest by a series of functional and convulsive disorders, of which headache, epilepsy, and special paralyses would be indications.

Your patients will always be solicitous as to the prognosis of the disease, and in order to answer them intelligently it is of course necessary to have clear and correct ideas of its diagnosis. If the interval of infection of the parent or parents before conception have been short, the chances are that the product will have syphilis, and of a grave form. This is more particularly the case if the mother be syphilitic, although there is no reason to suppose that the disease is more virulent when received from the mother than from the father.

If your parturient patient gives you a history of frequent abortions, it is a point worth considering in making up your diagnosis.

The appearance of a syphilitic product is of importance. This has been fully illustrated in my first lecture.

The prognosis is in proportion to the virulence of the symptoms and of their appearance. Late hereditary syphilis is rarely of grave prognostic significance. On the whole, the prognosis of hereditary syphilis is generally favorable, always providing that some serious visceral lesion does not complicate the case. The prognosis when gummata of the brain, liver, or kidneys, for example, arise, is much more grave.

Dr. Blaise discusses the interesting question how far the syphilis of the parents may be manifested in the children in diseased conditions which are not usually classed among the regular manifestations of the disease. He agrees with Fournier that syphilis does so influence children, and that this indirect transmission can only be the result of a deep organic disturbance of nutrition, which may bring into existence new predispositions to disease or awaken old or latent predispositions. He instances the frequent early deaths of children of syphilitic parents, the children dying from simple lack of vitality, without any discoverable cause; the cases of imbecility and idiocy which, without doubt, may be traced back to syphilis of the parents (cases of Fournier and of Tarnier). Hydrocephalus has also been observed (Lancereaux). There have also been noted various forms of failure of development, either general or partial.

You may meet the *syphilis héréditaire tardive* of Fournier, which is that form of hereditary syphilis which shows itself either at puberty or in later years, whether

or not there have been signs of syphilis early in life,—*i.e.*, the *syphilis héréditaire précoce*, which shows at birth or shortly after.

By many, hereditary syphilis has been regarded as a disease of infancy, and all who have not fallen an early sacrifice to it have been regarded as cured and beyond it; and to Fournier again is due the credit for having thrown new light upon late cases of hereditary syphilis.

The treatment of congenital syphilis is an extremely gratifying study. You must treat the mother before and during utero-gestation, endeavoring to eradicate the disease before conception takes place, or, if she be pregnant when you are consulted, endeavor to modify the disease so that the product may have a reasonable chance for life and health. This may be accomplished by the daily use of a pill containing $\frac{1}{12}$ gr. iod. hydrarg. with charcoal. You of course know that to mercury and iodide of potassium we look for our best results in the cases. Remember that the mercury must be in such doses and exhibited in such form as to produce the minimum amount of irritation of the gastro-intestinal tract. In order to prevent abortion, it is well to give it either by inunctions or vaporization. If symptoms of great urgency, select the former. The bichloride of mercury, in doses of $\frac{1}{100}$ of a grain, may be used for a long time with great tolerance. Some practitioners administer it hypodermically. If you give mercury by the mouth, I would advise the combination with small doses of opium or belladonna. After the child is born, you may then treat it either independently or through the milk of the mother. In infants, after giving mercury for a time, you may give half a grain of iodide of potassium dissolved in a tablespoonful of breast-milk. To the mother the child is harmless; to every one else the danger of infection is great. The best method of giving mercury to syphilitic children is by inunctions, or by the oleate of mercury in small amount, and I know of no better means than by spreading mercurial ointment over the child's binder. In this way it will neither cause intestinal derangement, purge, nor affect the gums.

If, however, you desire to give the mercury by the mouth, I would advise mercury with chalk, especially in summer-time. Iodide of potassium may be exhibited in simple watery solution, or you may combine some bitter tonic with it, or, again, the mercury and iodide of potassium may be given together, combined with compound syrup of sarsaparilla. You must, of course, recognize the fact, and explain it to your patients, that the treatment should be continued for a long time after all symptoms have disappeared. In cases where the constitutional treatment must be prolonged, you may use iodine, exhibiting $\frac{1}{2}$ to i gtt. doses, with syrup or emulsion of cod-liver oil, or you may rub the abdomen with a mixture of cod-liver oil and iodine, a drachm of the latter to ten ounces of the former. The further general treatment of a case of congenital syphilis would be the same as in the acquired variety, increasing the dosage in proportion to the age of the individual.

ORIGINAL COMMUNICATIONS.

SOUTHERN FLORIDA: A WINTER SANITARIUM.

Read before the Philadelphia County Medical Society, February 24, 1886,

BY WILLIAM A. EDWARDS, M.D.,

Instructor in Clinical Medicine, University of Pennsylvania; Physician to St. Joseph's Hospital.

THE facilities now offered to Northern tourists and invalids for reaching far-southern climes are so well adapted to comfort and ease of travel that the physician can feel justified in trusting the most delicate cases to the brief railway-journey necessary, which several years ago would have been wearing and fatiguing to the most robust. Indeed, a day and a night on a modern parlor- and sleeping-car is anything but an unpleasant experience, opening each moment new sights and, to the traveller from the North, odd customs of inhabitants of Southern States along the line of travel.

The study of climatology and the selection of sanitaria are of great importance to the physician; but, unfortunately, they usually receive but little attention from the practitioner. How often is the advanced invalid sent far away from his home and all that is dear to him, to be surrounded by strange sights and faces in a strange land, where he has been ordered by a physician who had not taken the trouble to look sufficiently into the matter in order to qualify himself to decide the important question as to which particular climate or

locality was the one best adapted to his patient's case! This has been well stated in a recent address before the American Climatological Association by Dr. John M. Keating, whose personal experience in climatology, gleaned from the climes of all nations, is second to none among us. In considering the matter of a selection of climate, Dr. Keating remarks as follows:

"How often have I met cases of advanced phthisis, away from all the comforts of home and its surroundings, dying in a strange land, sustained only by hope and the fact that they were carrying out the physician's order! I wish that my words could only be made sufficiently impressive to picture to you, as the subject comes up before me, the many sad cases I have witnessed. It is so very easy for the doctor, who possibly knows that all hope is ended and a fatal termination not very far distant, to say to his patient, 'Go to Algiers,' 'Go to Egypt, Australia, or California.' The poor, unfortunate patient is at once inspired with hope. His weakened frame is sustained by the nervous energy which is brought about by determination. The long journey before him is no obstacle. Its discomforts are discounted; and yet he scarcely reaches his destination before nature gives way. The journey to a foreign land requires a degree of strength that is often surprising even to a man in good health. The wear and tear, the vicissitudes of temperature, the character of the cooking, damp sheets, and the hard beds, are much more wearing than most of us imagine. Our Consul-General to Egypt some years ago told me that much of the business of the Consulate was the caring for the baggage of the consumptives who had been sent from home in the last stages of the disease, to run down more rapidly, and possibly die within two or three weeks of their arrival. One of the most shocking sights to the invalid travelling South is to run across the boxes with the death-certificate upon them waiting at the stations for the Northern train. Although I have the greatest possible belief in the value of the change of air and the residence in a suitable climate for those in the early stages of disease, or where predisposition exists, or during convalescence, I am strongly opposed to the method at present adopted of recommending places in a general way, regardless of their suitability and other matters as important as the climate itself. A physician should know thoroughly the place to which he is sending his patient,—be as familiar with it as with the drug he orders in his prescription.

"I met in a fog, on a ship in the China Sea, a young lady who had been recommended by her physician to New Zealand. When she reached there with her family, her condition was such that they determined to bring her home. They returned by way of China, and the dense fog they encountered increased the catarrhal phthisis, which was rapidly breaking down, until she was in a sorry condition. Had she been sent to Aiken or Thomasville, or possibly Bermuda or Santa Cruz, and surrounded by the comforts of life, in an equable climate, within a few hours of her own home, she certainly would have lived longer."

Among the many sanitaria which our varied climate brings within our command, South Florida pre-eminently suggests itself to the medical man in search of a winter-resort with a climate suitable for patients in need of out-door existence and a superabundance of pure, "unprebreathed" air.

The characteristics of the climate of South Florida are *mildness* and *equability;* it lies nearer the equator than any other of the States, yet extremes of temperature are usually unknown, the difference between the maximum of heat and cold being less marked than in any other part of this country. This applies more particularly to the southern part of the State, where frost is seldom found. The usual average daily temperature, it is said, does not vary more than twenty-five degrees, year in and year out.

There is probably no other region in the world where so many elements are present combining to make the climate mild and uniform as in South Central Florida, with Orlando and Winter Park as a centre.

Frosts do occur in Florida, and ice is sometimes found in the shallow waters which are much exposed; but this does not occur every winter, the present season of 1886 being a most unusual experience. For the Floridian south of Lake George, ice and frost would indeed be an unusual sight.

There is no clearly-defined "frost-line;" but the twenty-ninth degree separates the

region of damaging frosts from those that are extremely light.

We should bear in mind the fact that at the 29th or 28th parallel we must not expect the mild winter, the warmth and the sunshine of the tropics: for such we must either seek the tropics themselves or visit Southern California. Changes in temperature, rainy days and cloudy skies, will accompany the same conditions experienced in the North, though to a very much milder extent. These should be expected and prepared for. The absence of blinding snow, of heavy and continuous frosts, of biting winds, will enable the invalid to live in the open air.

If a patient wish to spend the entire winter South, he should choose the well-heated and comfortable hotels of Aiken, Thomasville, or Jacksonville, and remain there until he can be comfortably accommodated farther South.

People do not expect cold weather in the far South, as it comes but rarely, and when it does come the hotels are not prepared for it.

Cyclones and hurricanes never visit the State, nor do earthquakes arise, such as might cause more nervous prostration to a delicate patient in a few short moments than therapeutic skill can undo in months. Nor do the dwellers along the larger streams have to fear an overflow. Natural reservoirs have been constructed for the receipt of the immediate rainfall and for the drainage of the surrounding counties: hence the rise and fall of the rivers are automatically arranged by Nature's engineer. The water gathers in the lakes, these rise in their natural basins, and are again slowly reduced by the rivers.

It must be borne in mind that the entire State is now undergoing a most wonderful upheaval and improvement; marshes are being drained and cultivated, and thousands of acres are yearly meeting the husbandman's plough for the first time; yet, withal, fevers, especially malaria, are not at all frequent, except among those who systematically disobey all hygienic laws, drinking surface-water from creeks and living upon low and badly-drained lands, and continuing upon a basis of living and eating suitable only to cold climates. Some sections of the State are totally exempt from malaria, as those in the vicinity of the sea-shore, and also those in the high, dry pine-lands, with Orlando and its vicinity as an example. It is particularly in Orange County, of which Orlando is the county-seat, that the highest point above the sea is reached on the peninsula. Here you may find the pine-forests and a climate soft and even. This is the climate and the locality that I would particularly recommend for cases of phthisis,—in fact, for all thoracic affections; while for nervous prostration and neurasthenia in the aged it is perhaps the spot *par excellence*.

As an illustration of the mildness and equability of the climate of Orange County, I will quote from the report on meteorology: "In December, 1880, occurred the coldest weather known in Florida for fifteen years. On the coldest day the mercury at St. Augustine fell to 16°, at Jacksonville to 20°, at Palatka to 24°; at Orlando the mercury fell no lower than to 30°."

The writer has met many cases throughout Florida, but particularly in South Central Florida, healthy and vigorous, some of whom are physicians now enjoying large and lucrative practice, who several years ago came to this region as a *dernier ressort*.

It has also been my fortune to meet several men prominent in business and in public life, in fact shaping and giving character to the locality that we are considering, who, some years ago, came to Orlando simply as a last refuge from death.

The county is the most progressive region of a very progressive State. Some years ago—about fifteen—it hardly existed, save as a cattle-range with a very sparse population. Now it numbers 15,425 souls, —a gain since 1880 of 8807.

In this portion of the State is situated the famous lake-plateau, numbering one hundred lakes, along the margins of which people live in perfect health and comfort.

In Orange County no limestone is found; hence the drinking-water may be either supplied by wells or obtained from the clear, deep lakes. Thus the problem of drinking-water is again solved by nature. In some of the counties the residents must depend on rain-water collected in tanks for all their table uses.

The next important step is to consider the personal comfort of our patients during their Southern journey and the creature comforts that they will receive after their arrival.

The months of February, March, and

April, with us, are the most treacherous of the year; in Florida they are replete with all that is most conducive to the welfare of the invalid: this is the time when Florida is at its best.

Everybody coming to Florida by rail must stop at Jacksonville, and I would suggest that this be made the midway point. Let your patient here remain until he has entirely recovered from the wear and tear of his day-and-a-half railway-ride. Here will be found most excellent hotels, good drug-stores and physicians, plenty of amusement and avenues for mental diversion,—a most important, indeed an almost essential, factor in seeking health.

After this temporary breathing-spell, our patient will be ready to proceed farther down the peninsula, either by rail or by steamboat up the St. John River. The latter is the most interesting and instructive. The steamers are large, commodious, and comfortable. Berths can be secured for those patients too weak to sit about the decks and enjoy the ever-changing scenery. Many interesting towns are passed, and along the east bank of the river from Palatka to Little Lake George, a distance of twenty-five miles, fine residences and magnificent orange-groves in excellent cultivation are to be noted. On the opposite side, which is much lower, wild tropical plants and trees grow in profusion.

On entering Lake Monroe the patient is almost at the end of his river-trip, the terminus of the line being Sandford and Enterprise. Here I would again advise another halt in the journey. At Enterprise is to be found one of the best hotels in the South, where the invalid will find everything conducive to comfort. It is situated on one of the finest bluffs in the State; all tropical fruits are found in profusion; the hotel has a very fine orange-grove; indeed, the "Brock House Grove" is among the finest in this section of the State. The lands surrounding Enterprise are high, rolling, and well cultivated.

From here coaches run to New Smyrna, Halifax River, and its prominent points, where good hunting and fishing grounds are to be found; bear, deer, turkeys, snipe, ducks, and small game are found in profusion; so that our patient, if at all able to be about, will find plenty of amusement, and become enabled to set afoot the beneficial changes that may be expected to be derived from such an existence.

To continue his journey, he will be obliged to take train on the South Florida Railroad (the trunk-line of railway to Tampa) from Sandford, and after an hour and fifty minutes' ride will arrive at Winter Park, two hundred and twenty miles down the peninsula from Jacksonville, at which station will be found a small tram-car waiting to carry weak and sick persons from the station to the hotel, the "Seminole," a distance of about two and a half city squares.

The patient now finds himself excellently located upon high land, between two beautiful lakes, the ground gently sloping to either shore. From the promenades about the hotel nine lakes can be seen, bordered by graceful swaying pines and fruitful orange-trees.

Here, in the centre of tropical Florida, the invalid can sit and bask in the warm sunshine of Indian summer in our early spring, constantly breathing pure ocean air dried and impregnated with the odor of pine, drink pure, sweet water, and in fact find rest, comfort, health, and luxury. Many mental diversions are provided, tennis, croquet, bowling-alleys, billiards, good riding and driving horses, row- and sail-boats, steam-yachts running from lake to lake, with delightful walks among the old pines and orange-groves.

When we recall the fact that one-seventh of all deaths are annually attributed to phthisis in the United States, and that in Maine, for example, fifty per cent. of all deaths between the ages of twenty and forty years are due to this cause, the known failure of our therapeutic agents in this disease gives to the study of climatology renewed interest. That climate is a potent agent in the prevention of phthisis is demonstrated by the fact that certain regions show comparative immunity, consumption being extremely rare in the native population. Dr. Archibald Smith states, for example, that it is an exotic in the Peruvian Andes.

Damp, ill-drained land, cold, humid air, sudden changes of temperature, lack of sunlight, and anti-hygienic surroundings, all contribute to depress the general health and to occasion the fearful prevalence of phthisis in low-lying districts and in large cities. For instance, in New York the annual precipitation of rain and melted

snow is 42.70 inches, exhibiting at once one of the causes of large cities presenting such enormous phthisical mortalities.

Constant excess in the humidity of the earth and air predisposes to phthisical affections. On the other hand, dryness of earth and air gives to the residents of the locality under consideration comparative exemption from disorders of the respiratory tract. Laennec mentions a locality where the dampness of the soil was of such a character that two-thirds of the resident population died of phthisis.

When in search of a climate for the prevention or cure of consumption, dryness of air and soil and the invigorating influences of sunlight must be among the deciding factors.

As we see, South Central Florida is the region which presents us the most even climate, the largest proportion of fair, clear days, a sandy and absorbent soil, and the minimum amount of atmospheric moisture,—all the factors requisite in a perfect climate for the class of cases under consideration.

300 South Thirteenth Street, Philadelphia.

NOTES OF THIRTEEN CASES OF TUBERCULAR MENINGITIS.*

BY J. H. MUSSER, M.D.,
Physician to the Philadelphia Hospital.

ALL of the cases were observed in private practice: hence the lack of detail of symptoms, such as temperature, etc. They occurred in a period of six years. Nine of them were in the writer's private practice, two in institutions under his care, and two in the practice of medical friends. It may be considered a disease of frequent occurrence, for the relative proportion of its frequency to that of many other diseases, as forms of liver-disease, is much in excess. The nine cases occurred in a practice ranging from fifty to four hundred families yearly during the six years. For every case of tubercular meningitis the writer has had twenty-five of phthisis. During the same period one case each of tubercular peritonitis and interstitial tuberculosis have been under his care. In later years the disease has been less frequently seen, corresponding with the social improvement of the practice. In the first half, six cases were observed; in the latter half, the remaining ones. The mortality-table of the "Homes" to which the writer has been physician present some interesting features in this connection. In one Home of one hundred and eighty boys, aged from three to sixteen, and thirty adults, but three cases of tubercular meningitis occurred in five years. In a Home for twenty-four colored children of both sexes, mean age seven years, the disease was not observed in four years. In a third Home, for children of both sexes (about eighty in number), in the records of twelve years no death occurred from this disease. During the same period of observation of these nine cases, five cases of hydrocephaloid disease, one of cerebro-spinal meningitis, and two of syphilitic meningitis were observed.

Causes.—Seven of the cases were males, and six females, making the sex of no causal influence. The ages ranged from seven months to fourteen years in twelve cases; one was thirty-two. Six of the patients were under five years, four between five and ten, and two between ten and fifteen. The ancestors of nine had tuberculosis in some form. In two other instances the children of the same generation had some tubercular affection. In only two cases was there no antecedent or coincident history of tuberculosis in the family. One of the patients, aged seven months, was nursed by a mother whose tubercular disease antedated her pregnancy.

The hygienic surroundings in the large number of cases were quite fair. Two alone could be pronounced as bad. One child had been weaned early in life and improperly fed. The previous health of all save one or two was bad. Some remote local inflammatory foci, either of simple or specific nature, could be determined. In one, aged fifteen months, the bronchial and mesenteric glands, after a whooping-cough or diarrhœa, were diseased; asthma and bronchitis, with enlarged bronchial glands no doubt, preceded in another; hip-joint disease, suppurating cervical lymphatics, chronic bronchitis, and phthisis, respectively, preceded in four cases; very poor health in one instance, and "weak" lungs in another, also preceded; in one the health had apparently been good; in two the state of the health was not noted; exposure to the sun was thought to be the cause of the twelfth, but the lad was

* Read before the Philadelphia Neurological Society, January 25, 1886.

always fragile, and had diarrhœas; the nursing baby completes the list,—she was always delicate.

Clinical Course.—In general, it may be said to be irregular. In six cases the periods of invasion, excitation, and depression could be traced. In two instances the stage of invasion, or the premonitory symptoms, was absent entirely. In the other cases the stages were "mixed."

The following summary indicates the mode of development of the entire series: Case I. was a girl aged 16 months; antecedent cause, whooping-cough and tabes mesenterica: slight general spasm, followed in a few hours by convulsion of right side of body, with aphasia. In Case II., boy aged 4, with asthma, etc., there was loss of flesh for four weeks, intermitting headache ten days, vertigo three days; was peevish and restless at night. Case III., girl, aged 10 years, had for one year headache and vertigo, extreme emaciation, cerebellar tumor. In Case IV. there were loss of flesh, debility, restlessness, and poor appetite for several weeks. The course of the fifth was not known; while the sixth had been ill ten days definitely; for a brief time loss of flesh, with pain in the left temple, sleeplessness, and constipation had been present. Sharp, paroxysmal headache tormented the seventh case, a youth of 9, for three days prior to the meningitic explosion. Until twenty-four hours before very active symptoms occurred, the eighth case, an infant under two years, was considered in perfect health. Prolonged lassitude, fretfulness, and some emaciation preceded the illness of Case IX., a boy of 8. For four weeks the tenth case, a precocious little girl 5 years old, suffered from symptoms not unlike malaria: languor, emaciation, fretfulness, irregular intermitting fever, restlessness at night, poor appetite, without vomiting or constipation. The eleventh case had phthisis, but observed that his customary hectic had quitted him two weeks before the development of headache and vertigo, which symptoms antedated the active brain-symptoms by four days. The twelfth case did not thrive as a nursing baby should, and vomited frequently; a convulsion was the first warning of cerebral trouble. A little girl lost appetite, was peevish, slept poorly, was feverish, and became emaciated for three weeks before the cerebral symptoms developed. She had lymphatic enlargement in the neck and abdomen. Emaciation, debility, fretfulness, night-restlessness, irregular febrile movement, disorders of the gastro-intestinal tract, and headache were, therefore, the chief premonitory symptoms. Emaciation was, it is seen, the most frequent and most marked.

An analysis of the phenomena of the first and second stages would be tedious and without practical value. Reference in the succeeding notes will be made to some salient groups of symptoms present more or less in both stages, and to peculiar manifestations of common symptoms. Headache, motor and sensory irritations, and palsies occurred in all the cases. In a few the headache was distinctly intermitting. The spasms and palsies of groups of muscles were irregular in respective cases as to order or frequency. Hourly change in the state of the muscles was common, and the same may be said regarding sensation. Not only does this apply to alterations of function of spinal, but also of cerebral nerves. Convulsions (partial, unilateral, or general), delirium, and coma were present at the usual period, but presented no peculiar feature.

Special Senses.—Total blindness was observed in one case, impairment of vision in five; optic neuritis was recorded in three. The state of the pupils was not of special import; in one instance there was irregularity of size in the second stage. In the first stage they were not affected, save contracted in one instance and fixed in a dilated state in another. Dilatation was the rule in the second stage. Nystagmus was observed in one case. Purulent conjunctivitis occurred in eight cases, in the second stage usually, and in two cases was unilateral. Ptosis was present in only one case.

In five instances local erythema and general flushings were noted. An urticaria-like rash was seen in three instances. In the later stages pallor or a bluish hue of the face was observed. A unilateral mottling of the extremities was observed. Emaciation was marked and persistent in the prolonged cases, nine in all. Fever was present in the first stage in seven cases, in the second in nine, intermitting in type, often with irregular paroxysms. Hyperpyrexia was noted in one. The pulse was slow seven times in the first stage, irregular or intermitting in four. In the second

stage it was usually quickened, small, rapid, and feeble; twice slow and irregular. It was never wiry or corded in either stage.

Vomiting occurred but three times in the first stage, once only in the premonitory stage, and once only in the final stage. Constipation was seldom observed: three times in the first, twice in the second stage. Diarrhœa was excessive once. Offensiveness of the breath was very frequent, and occurred chiefly in the last stage, but was so marked at first, also, in three cases, as to be noted. In the larger number of instances (nine) the tongue was heavily coated. The scaphoid abdomen occurred at varying periods: once in the first stage, seven times in the second stage; while three times it is recorded absent; twice there is no record. Respiratory symptoms: first stage, irregular or Cheyne-Stokes four times, rapid twice, slow once; second stage, Cheyne-Stokes twice, rapid six times.

Remissions of a decided character were noted twice: after the development of the most grave symptoms, a period of improvement led to hopes of recovery.

Duration.—Of premonitory symptoms: unknown, twice; prolonged, once; one year, once (tumor); in two cases, about four weeks; in two, ten days; in one each, three days and twenty-four hours; in two they were absent, and in two the first stage developed at once.

First stage: twelve hours, 2; four days, 2; five days, 2; ten days, 2; eleven days, 1; thirteen days, 1; unknown, 3.

Second stage: twenty-four hours, 1; seven days, 1; five days, 3; forty-eight hours, 1; six days, 1; eight days, 1; four days, 2; nine days, 1; unknown, 2.

Entire duration: thirty-six hours, 1; four days, 1; seven days, 1; twelve days, 2; fifteen days, 2; eight days, 1; fourteen days, 1; eleven days, 1; unknown, 3.

The difficulty of estimating the duration is evident to any one. It can only be said that a short first stage, in all the instances, determined a short second stage.

A post-mortem examination was held on four of the cases. In two the disease was largely localized, once in the cerebellar region, in another over the right frontal convolutions, the presence of the tubercle causing, during life, the symptoms due to localized cerebral irritation at these points. The autopsy also revealed, in the case of aphasia, etc., a well-known rule that the amount of gross lesion is not to be inferred from the extent of symptoms.

Summary.—Tubercular meningitis may be considered a disease (1) of frequent occurrence, in the middle and lower classes especially; (2) more common than other localizations of tuberculosis except the pulmonary; and (3) much more frequent than other varieties of meningitis.

Among the causes most prominent are age, hereditary predisposition to tuberculosis, poor hygienic surroundings, and insufficient and poor food.

The prime factor always to be looked for is the presence of a primary focus, inflammatory, tubercular, or "cheesy."

The important symptoms presented in this series of cases were, in addition to the usually noted ones: in the premonitory stages, emaciation, irregular fever, and gastro-intestinal disorder, without vomiting; in the succeeding stages, purulent conjunctivitis, erythemas and other vascular changes in the skin, excessive emaciation, fever, offensiveness of breath, the scaphoid abdomen, and changes in respiratory rhythm.

DIPHTHERIA WITH APPEARANCE OF EXUDATION ONLY ON THE GUMS, AND OCCURRING SUDDENLY AFTER RUPTURE OF A SEWER-PIPE.

BY S. J. RADCLIFFE, M.D.,
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MACKENZIE says that the exudation of *false membrane* is almost an invariable phenomenon of diphtheria, that false membranes may form in the course of the disease upon any part of the mucous surfaces which are exposed to the air, and that they occasionally cover the tongue and mucous membrane of the lips. Diphtheria may also occur under certain conditions of the system without any deposition of false membrane at all. In the following case the deposit appeared only on the gums, but was accompanied by symptoms of acute pharyngitis and other local and systemic phenomena corroborating the general indications of diphtheria, its entire demeanor and sequelæ also indicating the nature of the disease. Diphtheritic deposits are not usually confined to so limited an area, and, while there may be diphtheria without exudation, the rule is

that the surface embraced is more extended and the deposit more continuous, consecutive, and wide-spread, and involves parts more deeply seated, and may be out of the line of view.

The case was that of B. K., a maiden lady of about 40 years of age, in good circumstances, stout figure, fleshy, well nourished, but physically not strong; had suffered for some years from catarrhal troubles of the air-passages and weak lungs, and she believed she had a tendency to tuberculosis from heredity. She had suffered for several days before I saw her with sore throat, difficult deglutition, huskiness of the voice, some fever, and marked debility or general malaise. She was not one to yield to light ailments, but in this instance she felt herself ill and that she needed medical advice at once,—her symptoms and the mode of attack being, as she supposed, somewhat peculiar.

I was called to see her for the first time May 1, and upon the first casual examination her outward appearance seemed to indicate some eruptive disease, but this idea was soon dispelled by more intimate inquiry. I found her temperature 101.6°, pulse 112, her face quite flushed, which she said was not unusual with her in fevers, tongue coated, her urine a little cloudy, passed in moderate quantity, bowels loose, with anorexia and thirst. The gums, fauces, soft palate, and pharynx were deeply red and swollen, with slight œdema of the uvula and soft palate, roughness of voice, and constant desire to clear the throat.

Rhinoscopic and laryngoscopic examinations showed deep redness of the entire nasopharyngeal tract, with puffiness of the entire mucous surface, the efflorescence tapering off by gradual extension into the larynx, and involving somewhat the vocal bands. The mucous membrane was dry, the follicles flattened from distention of the surrounding parts, with scarcely an elevated point by which they might be distinguished or isolated; the inflammatory condition extending also into the posterior nares, impeding free nasal respiration.

The second day the pulse increased to 128, and the temperature rose to 103.6°. The patient was very nervous and restless, and had had but little sleep. She complained very much of her throat, and particularly of her mouth. She could scarcely allow me to touch it for examination. On drawing back the cheeks from the gums I discovered a line of grayish-white false membrane embedded and filling up the space between the cheeks and alveolar processes, beginning at the last molars behind on each side, and extending anteriorly, nearly meeting in front, or quite as far as the lower canine teeth. The membrane was tough and adherent, and could not be removed by forceps or a soft napkin gently applied in the grasp of the fingers. If lifted from its bed and pulled it would stretch, but its tenacity was such that it would not yield to moderate force. No other evidence of membranous deposit could be discovered by careful examination by the mirror either on the fauces, tonsils, or in the pharyngeal space. The mucous surfaces were perhaps a little duller in hue, but the voice was still more husky, and at times without tone, amounting almost to aphonia.

May 3, the third day of treatment, the pulse was 120, temperature 103°. The membrane still adhered to the gums and sides of the teeth; it had not extended, but was not disposed to separate. The pharyngeal mucous membrane somewhat faded in general outline, but appearances indicated no material abatement in the disease. Her bowels were inclined to be loose, and she had had several movements in the past twenty-four hours. Her urine showed some cloudiness by heat, but not sufficient to point to any albuminuric complication.

On the fifth day the pulse was 110, temperature 101.5°, with no great change in the general condition of the patient. She was somewhat better, but she was very weak and exhausted. She could take no food, and therefore could not be sufficiently nourished. As she was inclined to diarrhœa, her diet was principally milk. Beef-tea or extract could not be given in any quantity. The false membrane had become detached in places, but still remained entire; it was tough and stringy and maintained its continuity, and was hard to dislodge. When raised, the surface below was raw and bleeding.

May 9, the ninth day of treatment, the pulse was down to 98, temperature 100.3°, and the membrane had nearly disappeared,—only a little of it remained posteriorly,—the disappearance being due partly to the persevering efforts of the patient to tear it away and partly to its disintegration; the bowels and urine in a more normal condition, but no decided improvement in general strength, and no appetite for food. Her voice-tone was still weak and frequently inaudible.

May 15. Convalescence had not been shown in so marked degree as desired, though there had been great improvement in the past twenty-four hours. She still remained in bed, and complained of great prostration. The line of inflamed surface from which the membrane had been detached was raw, and required some effort to prevent the contiguous surfaces from adhering. Pledgets of cotton in carbolized oil had to be inserted to keep the parts separated.

May 18. The patient had so far recovered as to require no further special treatment. Her pharyngeal surfaces had become nearly normal in appearance, and the inflamed gums had healed. Her voice was still low in timbre, indicating an atonic condition, but she spoke

with more force if she made an effort to do so. Regular visits were discontinued.

The treatment in this case consisted mainly, locally, in spraying the mouth and throat with Dobell's carbolized solution and solution of tannic acid and glycerin, and occasionally small pieces of ice in the mouth; and, generally, the administration of quinine, iron, solution of acetate of ammonium, sulpho-carbolate of sodium in full doses, and a few doses of bismuth subnitrate to correct the bowels, with free stimulation with milk-punch, brandy, or champagne as she preferred, accompanied by the usual fluid diet. For the partial aphonia, wine of coca seemed to have a very beneficial effect. The patient was visited twice daily for the first ten days, and a personal inspection and application made into all the details of treatment. Attention was given to disinfection and the prompt destruction of all cloths and other means used to cleanse the mouth or throat. She finally made a good recovery, after a sojourn for several weeks at the seashore.

Very great interest is attached to this case, besides its novel appearance, from the fact of its sudden supervention upon a known local cause. A sewer-pipe burst in the adjoining dwelling, flooding the cellar of that house, and the effluvia penetrated the walls and contaminated the air of the house in which the patient lived. Two days after this occurrence she was taken sick, and this period was the beginning of the illness that prostrated her. The cause and effect seemed to be too apparent to cause the least doubt or cavil as to the real disease in question.

1623 K Street, N. W.

REVIEW OF THE PROGRESS OF MEDICAL AND SURGICAL ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,
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ELECTRICITY IN GYNÆCOLOGY AND OBSTETRICS.

DR. PAUL F. MUNDÉ has given an elaborate paper, running through the columns of the *American Journal of Obstetrics*, on the use of electricity in gynæcology, which has attracted wide attention as coming from so distinguished an authority. The reviewer, in calling attention to the electrical treatment of dysmenorrhœa and other disturbances of the non-pregnant uterus some ten years ago, was astonished to note the want of intelligent comprehension of the subject evinced by those taking part in the discussion of his papers, and particularly in the instance of those whose experience as gynæcologists should have led them to careful study of the morbid conditions present. The lack of familiarity with scientific electro-therapeutics on the part of so many general practitioners, who must necessarily treat the majority of gynæcological cases, will, it is hoped, be remedied somewhat by the authoritative character of Professor Mundé's endorsement of electrical treatment. We have no doubt that one-half, if not more, of the uterine ailments treated by country physicians would fare better under electro-therapeutics than they do under the imperfect, not to say unnecessary, surgical management employed; and many city practitioners are on the same level. The conclusions drawn by Dr. Mundé are tabulated below.

1. Electricity, locally applied, is a valuable agent in gynæcological practice, and should be more widely used than it is.

2. It does not require special knowledge or experience as an electrologist to be able to use the agent safely and beneficially in gynæcological practice.

3. The remedy, if properly used and on correct indications, cannot do harm.

4. It should be used only in chronic conditions, and, if it is the galvanic current, should give no pain.

5. The conditions in which the faradic current is indicated are chiefly those characterized by deficient development or want of tone of the sexual organs, such as imperfect development of uterus and ovaries, superinvolution, subinvolution, amenorrhœa, uterine displacements, interstitial fibroids. The object of the faradic current is to stimulate the organs to increased growth or activity, and to produce muscular contraction.

6. The conditions in which the galvanic current is indicated are those in which it is desired to promote absorption of adventitious products, chiefly the result of previous inflammation, to allay pain, to excite reparative action, and occasionally to act as a caustic. The rapidly-interrupted galvanic current, however, also excites muscular contraction.

7. Perseverance in the treatment is essential to success.

8. Acute and subacute inflammatory conditions, as a rule, contra-indicate local treatment by electricity.

9. The pathological conditions in which electricity proves useful are those in which other treatment often fails or cannot be borne by the patient.

10. In organic diseases, a permanent cure or a restoration of the diseased organs to perfect health can usually not be accomplished by electricity, but great relief from pain and certainly temporary improvement in otherwise intractable cases can be achieved by it, without danger and with comparatively little discomfort to the patient.

We cannot agree with Dr. Mundé in his second point. Whilst, with care, mild currents (particularly faradic) will do no harm, very considerable experience is needed to use galvanism beneficially in stubborn and old-standing cases. It is just because hap-hazard methods are used that many failures result. Further, the doctor states that the *direction* of the galvanic current does not make much difference in his hands. Electrologists certainly do derive differing results in many pathological conditions: for example, in subduing hyperæmia. A direct, uninterrupted, *descending* current will relieve promptly uterine engorgement, when a reversed direction will not only fail, but, in ninety per cent. of all cases, will intensify the disorder. So also in neuralgic conditions, gynæcological or general, *direction* is all-important.

That electricity should be used only in chronic conditions is, we think, too restrictive. In many cases of acute metritis and metro-peritonitis, not only the suffering but the intensity of the inflammation has in our hands been notably relieved.

Dr. Starley, in *Daniel's Texas Medical Journal*, gives a résumé of his experience with electricity in gynæcology, and relies on it largely after an extended experimentation.

ELECTRICITY IN THE TREATMENT OF EXTRA-UTERINE PREGNANCY.

So many reliable reports of successful management of this terrible misfortune have appeared lately as fully to substantiate the value of either current in destroying the embryo in its abnormal position. Although the writer was not the first to report the transit along the Fallopian tube of an extra-uterine fœtation to the uterus through the unaided effort of nature, he does not know of any instance prior to that presented by him to the Medico-Legal Society in a paper subsequently published,* in which electricity successfully forced the fœtus a distance of fully two and a half inches within the tube before it reached the uterus,—an unlooked-for result, because the current was used simply to *destroy* the foreign body. Considerable adverse criticism followed the report; but another case is now given by Dr. Henry J. Garrigues, the prominent gynæcologist and obstetrician of New York,† in which faradism drove the body from the tube into the womb, and in which, as in my own, the life of the child was not destroyed.

In a case under the care of Dr. McBurney, Drs. Emmet and Thomas saw the woman in consultation and confirmed the diagnosis of extra-uterine pregnancy. Electricity destroyed the fœtus, which was delivered through the uterus.

A case of transfer to the uterus from the left tube (without electricity) was reported by Dr. Janvrin in the *American Journal of Obstetrics* (vol. xviii. p. 855, August, 1885).

As we go to press, another case is reported of extra-uterine pregnancy changed to intra-uterine by electricity, under the care of Dr. Augustus Stabler, of Lawrence, Massachusetts. (*Medical News*, February 27, 1886).

ELECTRICITY IN FIBRO-MYOMA.

Apostoli records upwards of one hundred cases treated, some by faradism, but the majority by as strong galvanic currents as were bearable. The tumors do not, it is stated, altogether disappear, but shrink to a small nodular point, and, in his experience, do not again enlarge. The anode is intra-uterine. In a case now under our care, a condensation of fully one-half is attained under two months' treatment, the applications being tri-weekly,—thirty cells; anode internal, cathode a small sponge rheophore firmly pressed over the myoma. This patient only lacked the fee to secure laparotomy, and declined a gratuitous exploratory incision proffered by the expert consulted.

* Medical Bulletin, May, 1885.
† Therapeutic Gazette, December, 1885.

TREATMENT OF PERI-UTERINE HÆMATOCELE, MENORRHAGIA, AND POST-PARTUM HEMORRHAGE.

At a recent meeting of the French Association for the Advancement of Science, held at Grenoble, a paper was presented by MM. Apostoli and Doléris upon a new method of treatment of pelvic hæmatocele by negative galvano-puncture. A double advantage is claimed for this procedure. The first is that, if the negative pole be used, a soft, non-retractive eschar is formed, and the resulting fistula remains patent for a sufficient length of time, while adhesions are formed between the pathological cavity and the mucous membrane. The second is that the electrical current causes a modification of nutrition and provokes a more or less rapid regressive action in the pathological formation. The puncture should be made as nearly as possible in the centre of the tumor, care being taken to avoid the uterus, intestines, or a large vessel. In order to determine the relations of the parts, a careful rectal and vaginal examination should be made. The current should be of the strength of one hundred milliampères, and the duration of its application should be from five to ten minutes. The Léclanché element is the one preferred by the authors. The negative pole is a trocar of medium size protected by a glass or caoutchouc sheath, and the positive pole a large cake of clay moulded over the abdomen or one of the thighs of the patient. Antiseptic precautions are used during the operation, and subsequently a strong solution of carbolic acid is injected twice a day into the vagina. The authors claim that by the use of this method a speedy cure of pelvic hæmatocele may be obtained, thus reducing very materially the gravity of prognosis. The operation should be performed at the earliest practicable period. The danger of the procedure lies chiefly in the liability of wounding a large vessel and giving rise to hemorrhage; but this can usually be avoided by a digital examination made to determine the situation of any pulsating arteries.

In a case of retro-uterine hæmatocele subsequent to a prolonged and difficult labor, we used electricity, but puncture was avoided, the rheophores being applied by the vagina and rectum, and the mass was reduced to about one-fourth the original bulk. From eighty to one hundred and thirty milliampères were employed from thirty to forty-five minutes daily for about six weeks. A combination of carbonate and muriate of ammonia was administered during the treatment by request of the family physician; but, to our mind, the curative result was entirely due to the current. The applications were painful when over ninety milliampères were given, but in a reported case of extra-uterine pregnancy a greatly stronger current provoked little pain beyond intense itching over the abdomen subsequent to the removal of the rheophores, which persisted for two hours. From the success here attained, we would hesitate to use puncture before fully trying the method we adopted.

In a series of nine menorrhagic patients excellent results have followed faradism applied just before the establishment of the menstruation, and again just prior to its cessation; and at the second month the treatment was begun one day earlier, and next month two days earlier. Both the onset and exit of the flow were attacked, and, as a consequence, three of those who usually were unwell for *seven* days prior to treatment were over the difficulty in *four* days after three months' treatment (six applications); three were reduced from six to four days; one from seven to five days; and two were not relieved. Severe associated dysmenorrhœa in three of the cases was greatly diminished, and in one it disappeared altogether. The latter case had undergone prolonged surgical and medical measures before coming into our hands, without any relief.

In this connection a case of severe post-partum hemorrhage may be mentioned, in which we used faradism, and it was readily terminated, after the failure of ice, hot water, massage, and ergot had led a friend to ask our assistance. One of the small pocket induction-machines now so common would add little to the weight of the obstetric bag, yet it would at times serve a good purpose.

ELECTRIC LIGHT IN SURGERY OF THE BLADDER AND RECTUM.

Dr. Robson, Honorary Surgeon to the Leeds General Infirmary, relates two interesting cases, one of which was that of a person supposed to have tumor of the bladder. Upon dilatation by Weiss's instrument, digital investigation located a hard, flattened, and nodulated mass close to the entrance of the left ureter. A small

(one-half candle-power) Swan electric lamp was introduced and energized by a Faure storage-battery. The illumination disclosed a bleeding surface, and enabled the exact application of an iron-perchloride solution. The hemorrhage and dysuria were relieved at once, no constitutional disturbance ensued, and the patient's general health was notably improved. The second use of the light was in locating a bleeding point after removal of internal hemorrhoids by clamp and cautery. The rectum was almost filled with blood, and nothing availed until the light disclosed the origin of the hemorrhage, which a ligature then controlled.

IMPROVED ELECTRIC OPHTHALMOSCOPE.

Messrs. Pickard and Curry, 195 Great Portland Street, W. London, have constructed, after a design of Henry Jules, F.R.C.S., Ophthalmic Surgeon to St. Mary's Hospital, a refraction ophthalmoscope carrying a single disk, nine convex and fifteen concave lenses from 1 to 20 and 1 to 30 dioptres respectively. The special arrangement using an incandescent loop is stated to be very satisfactory, and its cost is quite moderate. (*British Medical Journal*, February 13, 1886).

GALVANO-CAUTERY IN OCULAR THERAPEUTICS.

At the late Congress of Ophthalmologists held in Copenhagen, M. Nieden considered this subject in detail. He observed that the galvano-cautery was adapted to the diseases affecting the conjunctiva and the cornea, and especially to those in which there was evidence of a mycotic origin, such, for example, as trachoma, conjunctival xerosis, rodent ulcer of the cornea, and scrofulous marginal ulcer. In such cases it effects complete disinfection, as is proved by the clean surface of the base of the ulcer and the improved tendency to heal which is exhibited immediately after its application, the aqueous humor at the same time becoming clearer, the iris dilating, and any hypopyon that may be present undergoing absorption. It may, he thinks, in the majority of cases replace the operation of keratotomy, and, if perforation of the cornea is required, the incandescent loop can effect the opening of the anterior chamber through the base of the ulcer with ease. The instrument possesses the great advantage that its application is attended with very little pain; that it can be employed without an anæsthetic, without a speculum, and without assistance. Out of eighty-three ulcers that had presented themselves to him, one application of the galvano-cautery cured eighty-two, and three of these were rodent ulcer, and there was hypopyon in sixty-six. Ciliary neuralgia was rapidly dissipated. The duration of the treatment was thirteen and a half days for each case. (*Recueil d' Ophthalmologie*, p. 57, No. 1, 1885.)

Professor Waugh, of the Medico-Chirurgical College, finds the galvano-cautery serviceable in gynæcological practice, and illustrates his method by a number of cases, one of which was a cervical tumor which rebelled against the ordinary treatment, hemorrhage following any interference. The loop removed the growth, and no bleeding followed the operation.

ELECTROLYSIS IN NÆVUS.

M. Leplat recently exhibited a girl 8 years of age to the Medico-Chirurgical Society of Liège, who was afflicted with a large nævus covering the left temple, the lower lid, and a third of the upper lid of the same side. It was treated by galvano-puncture, and resulted in securing an almost normal condition. The pulsation of the mass was obliterated, the color was lightened; but from the employment of steel needles a number of depressed scars resulted, some white (negative pole), the others reddish-brown. In suitable cases platinum needles obviate scarring; but cosmetic results seem to be neglected in operations about the face by many Continental surgeons.

In a case of obstinate lead-palsy, Dr. Lopez Alonzo relates (*Revista de Medicina y Cirugía Prácticas*) the result attained by puncture after failure of the "strongest currents" to the skin in the ordinary way. It is difficult to conceive the necessity for the procedure in simple loss of contractility of the extensor muscles of the forearm, when we learn that in a few days the desired result followed electro-puncture. A fair knowledge of motor points, a little perseverance, a *moderate* current-strength, and the addition of massage would undoubtedly have secured the end in less than the time expended during a really painful procedure. The patient, we are told, returned to the work which caused his wrist-drop.

We have now under treatment at the hospital a severe case of "wrist-drop," in which *static* electricity has cured the patient in three previous instances. The man has remained free from trouble so long as he avoids his trade of painting; but, being expert and earning good wages, he has disobeyed the advice given and suffered in consequence. Nothing except electricity was used heretofore, and recovery has been rapid.

ELECTROLYTIC TREATMENT OF URETHRAL STRICTURES.

Dr. Newman gives an additional series of cases tabulated since we last adverted to the matter. In these none less than those three years under observation are included, and repeated examinations by himself or the family physician have decided the results as apparently permanent. He now prefers a bougie three sizes larger than the calibre of the stricture, used once daily, *not* oiled, and not introduced a second time at the same sitting. He does not state his experience in enlarged prostate, but we have had excellent results in several cases, the applications, however, requiring repetition once or twice a month after a fair amount of relief is first obtained. Reference here is made only to cases previously demanding constant catheterization.

ELECTRICITY IN DIPHTHERIA.

With no faith personally in local applications of any sort for removing and preventing the renewal of membranous exudation in the throat, we give the annexed as a possible assistant in this terrible malady. The procedure is based on the well-known fact that electricity will often modify the condition of indolent ulcers and prevent tissue-destruction. Faradism is credited by Dr. Clemens here, but we would hardly rely upon the induced current in preference to galvanism in destroying pathogenetic tissue or in stimulating nutrition. In some cases he uses chlorides, carbolic acid, iodides, etc., to moisten the rheophores, and in others water only, and he reports the membrane as being easily detached by the wire rheophore when applied to the exudation. He recommends two or more applications daily, which we imagine would be distasteful to the patient and troublesome to the physician.

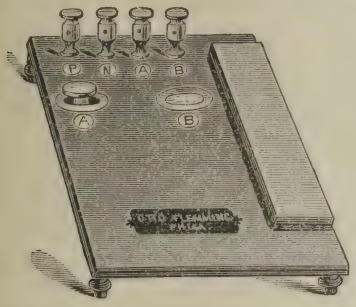
The application of the galvano-cautery is highly spoken of by Dr. Bloebaum in the *Deutsch Medizinal Zeitung*, and his views are supported by a further contribution from Dr. Tedeschi (*Rivista Venet.*). Stress is laid upon the assertion that no return of the membrane occurs after cauterization by this method, and the swelling of the glandular and connective tissues is promptly reduced, together with lowering of the fever. The membrane is readily loosened, and it curls up under light applications. Scabbing occurs, and in from one to three weeks the crust falls off, leaving perfectly healthy mucous membrane behind.

IMPROVEMENTS IN MEDICAL AND SURGICAL BATTERIES.

Mr. Flemming, of this city, the well-known electrical engineer and mechanician, has steadily advanced the excellence of his apparatus, and we advert to two results of interest particularly to the general practitioner, especially to gentlemen distant from large cities, where access is easy to the maker should a break-down occur. A compact yet really serviceable universal battery of sufficient power for ordinary use has been not only a desideratum, but a difficult object to attain heretofore. Some years ago his combined batteries were produced, but recently the problem of consolidating within a moderate space galvanism, cautery, and induction has been thoroughly accomplished. The commutator for coupling the battery in quantity or intensity as desired is simple but very effective, and, after very thorough tests, we are satisfied that some very troublesome characteristics of combined batteries are now eliminated. The usual size of apparatus comprises twenty cells, with all necessary adjuncts to either current. One special excellence is the ability to maintain an electric lamp of sufficient candle-power for any use without resorting to unreliable secondary or storage cells, and the incandescent loop is as well maintained in air as in vacuo, for cautery or electro-puncture. Simple mechanism immerses or releases the plates at will, and sizes up to sixty cells, if desired, can be constructed.

An exceedingly handy adjunct is the pole-changer shown, which has the advantages without the defects of former pedal attachments. Either current is controlled by the foot, leaving the operator free to use his hands. We have found the value of the accessory in epilation by electrolysis, because many patients are timid and

embarrass the operator if the "make and break" is left to them, both his hands



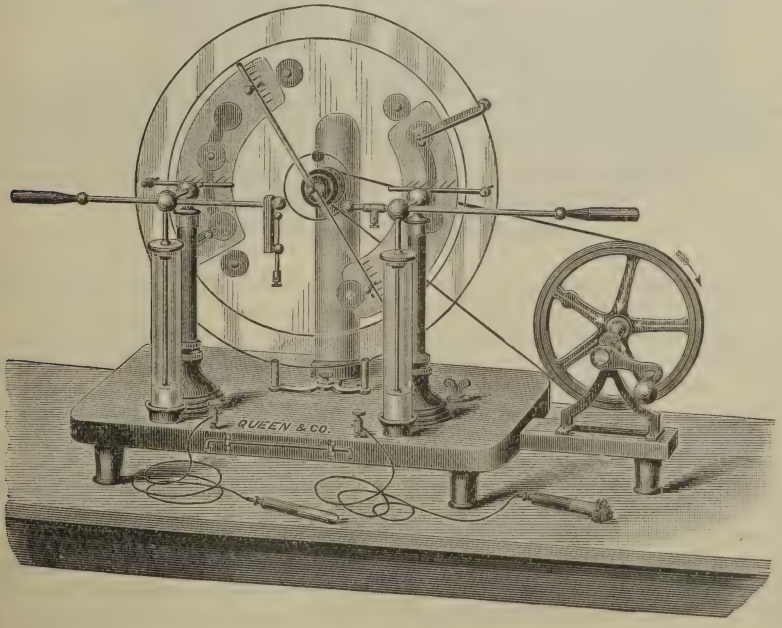
being employed. When a magnifying lens is necessary, the utility of the apparatus is evident.

STATIC ELECTRICITY—IMPROVED MECHANISM.

A number of cases of paralysis of varying type have been under observation in our private practice, and in all the result under static electricity has been satisfactory. In an instance of monoplegia which had resisted galvanism and faradism thoroughly tried for many months, six weeks of moderate static applications have so far removed the paralysis as to enable the use for most purposes of the hand and arm. The instance of lead-palsy referred to on a previous page illustrates happily the advantage of high-tension currents in wrist-drop, and it is supported by a number of private cases in which equally good results were thus obtained.

As a therapeutic measure Vigoroux employs this form very extensively, and his clinics present a series of cases quite diverse in character, yet the success attained in his treatment is steadily maintained. The first report of the reviewer's experience with static electricity* can now be largely supplemented, and the high value set upon it in his original report has not diminished during the time which has elapsed. The mechanism then illustrated has been improved by several manufacturers, but Messrs. James W. Queen & Co., of this city, maintain pre-eminence in the character of their Toepler-Holtz. Based originally upon a good idea, they have not only simplified the apparatus, but enhanced its value in many respects, particularly in strengthening all moving parts, and in securing complete adjustment and alignment of the plates. A device just completed by Mr. Richardson, electrician to the firm, enables the direct current to be taken from the sliding-rods. The binding-clamps between the large ball on the Leyden condenser and the small one on the sliding-rod on the right (as seen in the illustration) is fixed, but that on the left is

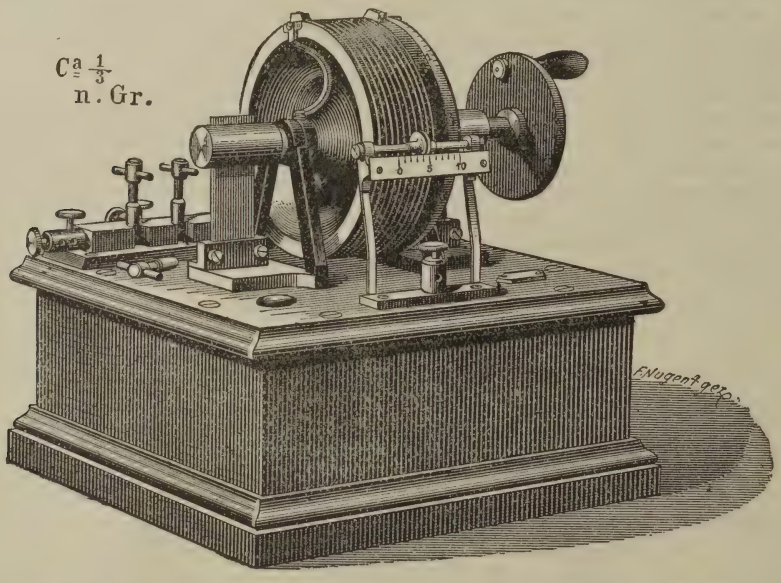
* Proceedings of the Philadelphia County Medical Society, vol. iv. pp. 15-24.



adjustable vertically, and any length of spark, from a hair's breadth in length to some three inches, is graded at will. The secondary induction is gotten at the posts on the base, the connecting-bar being removed. The cut shows the rheophores in place for this effect. Failure to obtain good therapeutic results has heretofore been largely due to defective mechanism, but the efforts which have produced this machine remove the difficulty and leave nothing to be desired. Their twenty-inch machine is fully up to the requirements of general practice.

In amenorrhœa static electricity is reported by several Continental authorities as gaining ground, but we presume its value is fully known in this direction to American electricians.

In cases where a variable measured resistance is desired, which can be raised from zero to any degree needed without break, the Wheatstone-Kirchhoff Bridge contrived by Professor Kohlrausch is an admirable instrument. It operates on the sliding principle, and bears the same relation to the ordinary plug-rheostat that a trombone does to brass instruments, or a violin to string instruments,—that is, the resistance progresses by infinitesimal degrees, and not by tens, fifties, or hundreds of ohms at once, as in ordinary coils. In using galvanism, for instance, in extra-uterine pregnancy or in testing for the reactions of degeneration, in applications about the head, or in laboratory-work, the value of this instrument is great, and we call attention to it after learning its worth, Messrs. Queen & Co. having kindly placed it at our service for experimentation.



Dr. Ambrose L. Ranney, of New York, in giving his experience in electro-therapeutics, reiterates his dependence upon static electricity in preference to other forms, particularly in treating neuralgia. In the course of his lectures at the University of Vermont, recently, he said,—

"I have lately come to regard static electricity (franklinism) as more generally applicable to spasmodic conditions (hysteria, torticollis, blepharospasm, tremor, contracture, etc.) than either faradism or galvanism. It seems, in my experience, to act more promptly and to produce more lasting results than the methods more commonly recommended by authors. I would advise those of you who decide to purchase a static machine to try the effects of insulation, the 'electric wind,' and the indirect spark (as the circumstances may indicate) faithfully before you resort to galvanization or faradization. If good results are not obtained, you can easily substitute for it the other forms of treatment at a later date. I should never regard any case as hopeless until it had been thoroughly tried (after all reflex causes had been removed). I have cured several severe cases of tonic

spasm of the muscles of the neck in a few sittings by means of the indirect spark, and relieved many cases of suffering from other forms of spasm in a short time.

"Rockwell's method of employing 'central galvanization' in epilepsy does not, to my mind, equal in beneficial effects the use of static insulation and the drawing of indirect sparks from the neck and back of the patient. It is my custom, however, in some cases to employ both of these procedures, each being used alone during alternate weeks for a period of two or three months with daily sittings.

"In chorea I have obtained the best results with static insulation and sparks."

He also finds static applications valuable in sciatica, and refers to cases not only relieved at one sitting, but now and then cured. Our own experience leads us to rely upon galvanism specially in this affection, although insulation and the "indirect spark" is often serviceable in reducing the suffering temporarily. The "electric wind" we believe to be refreshing in "nerve-tire" and muscle-weariness, but we do not find it of notable service in actual neuralgia. In some instances of insomnia it has acted happily, and in saving weak stomachs from morphine or chloral this point is worthy of notice.

A NEW METHOD OF RENDERING THE LÉCLANCHÉ ELEMENTS PORTABLE.

M. Guérin, in *La Nature*, describes his method of using agar-agar for gelatinizing the solution of this element (or any other single fluid element, we think) and thus rendering spilling impossible. The internal resistance is heightened slightly, which is no drawback. The jelly works apparently as well as the usual liquid, and for some purposes the novelty may be an advantage, as it is difficult to keep cells water-tight, no matter how well sealed they may be originally.

THE GALVANIC TASTE.

A discomfort to many persons who require galvanism about the face is the persistent copper-taste. In several instances of exophthalmic goitre in which one rheophore was placed in the auriculo-maxillary fossa this complaint was made, and we remember one instance in which electricity was discontinued solely because of the "galvanic taste," which was several hours in subsiding. Dr. Leslie Phillips, of Birmingham, England, has discovered the fact that coffee chewed for a short time will remove the discomfort, and we can confirm his statement after due trial. From the well-known efficacy of the fumes from burning coffee as a deodorizer, it is singular that no one found this out sooner.

246 North Twentieth Street.

TRANSLATIONS.

Regeneration of Tendons by Grafting.—MM. Fargin and Assake, with the view of ascertaining the best surgical method for obtaining regeneration of tendons which have been shortened by wounds or operations, tested on animals the method Gluck had applied to human subjects: the two extremities of a cut tendon were joined together by a bridge of catgut threads. MM. Fargin and Assake excised a portion of a rabbit's tendo Achillis and filled up the hiatus with catgut threads, rigorously observing all antiseptic methods necessary to insure reunion by first intention. After the operation the animal slightly dragged the paw operated on. It was killed on the forty-ninth day. On examination, it was observed that the catgut threads were replaced by a fibrous production, and its structure closely resembled that of a tendon without being identically the same. Another animal was operated on in the same way, and was killed one hundred days subsequently. It was observed that the newly-formed tendon was further advanced in structure than the one in the preceding experiment. In both instances the catgut threads were absorbed, and evidently promoted the regeneration of the tendon. Encouraged by this success, these authors made further experiments. They substituted portions of tendon for the catgut. In one series of experiments the tendon grafted was taken from an animal of the same species as the one operated on; in another series, from animals of a different species. They grafted on a rabbit from the tendons of a sheep, of a dog, duck, fowl, and turkey, and *vice versa*. They observed that reunion by first intention took place rapidly, notwithstanding the difference in the zoological order of the animals. These results evidently warrant surgeons in adopting the method of animal-grafting. When reunion by first intention is impossible, and the loss of tendon-sub-

stance must be replaced by a substitute, the chance of success will be greater if the tendon used for grafting is chosen from an animal the nearest to man in zoological order. Rigorous antiseptic measures are indispensable.

Tetanus confined to the Head.—Dr. Hadlich reports a case (*Berliner Klinische Wochenschrift*, No. 17, 1885) of a child, 2½ years of age, who, twelve days after receiving a superficial wound of the right cheek, presented the first symptoms of a peculiar neurosis. Paralysis of the right facial nerve appeared, and in the course of four or five days trismus developed, but it was not until the eighth day after the beginning of the facial paralysis that tetanic spasms occurred. The presence of spasm in the area of distribution of the paralyzed facial nerve was a striking symptom in this case. There was observed tonic contraction of the right orbicularis palpebrarum, as well as of the orbicularis oris and levator alæ nasi, giving the face of the child a peculiar drawn expression. These symptoms came on slowly and disappeared gradually, but the face was drawn to one side for a considerable time. Cramps of the throat-muscles were not present in this case: so that the name of hydrophobic tetanus, as suggested by Rose for this condition, does not seem applicable. Of the sixteen cases on record thus far, only five have recovered, this being the youngest.—*Centralblatt für Chirurgie*, No. 44.

Lesions of Peripheral Nerves in Typhoid Fever.—MM. Vaillard and Pitres have, on several occasions, demonstrated that in typhoid fever peripheral nerves may present diffused lesions resembling parenchymatous neuritis,—breaking up of the myeline proliferation of the nuclei of the interannular segments, and more or less atrophy of the nerve-fibres. These alterations have been observed in three patients dead from typhoid fever: they all died without presenting any symptoms of nerve-lesions. At the necropsy of one, the brain-meninges, spinal cord, and the roots of the spinal nerves were healthy. The musculo-cutaneous nerves, the internal brachials, and the terminal branches given off by the ulnar nerves presented lesions somewhat limited in superficial area, but extending deeply into the substance of the nerves. At the necropsy of the two others, the nerves of both the lower limbs and some of one of the upper limbs presented serious and extended lesions. In a fourth subject the superficial nerves were attacked with parenchymatous neuritis.

Pyocyanic Affection.—At a recent meeting of the Paris Biological Society M. Charrin stated that he had inoculated some rabbits with a few drops of pyocyanin, and thus determined an affection which presents two clinical aspects, one acute, the other chronic. The principal morbid feature is albuminuria. This is followed by diarrhœa, retention of urine, ophthalmia, and paresis. When, after inoculation, a portion of the animal's spinal cord or a small quantity of its serum is cultivated in broth, the presence of pyocyanin is detected. When the micrococci contained in the cultivation-fluid are removed by filtration, an enormous quantity must be used in inoculations in order to provoke a pathological condition. Thus it may be concluded that the toxic principle of pyocyanin resides in the microbes, and it is manifested by certain lesions, such as nephritis, enteritis, etc.

Bromhydrate of Pelletiérine.—M. Galezowski read a paper before the Académie de Médecine on "The Action of Pelletiérine on the Motor Nerves of the Eye." His researches are based on the ocular disturbance which occurs in subjects who absorb pelletiérine: they are affected with diplopia. The observance of this fact induced M. Galezowski to prescribe pelletiérine when there is paralysis of the third and sixth pairs. Iodide of potassium and blisters have failed where pelletiérine has cured. The preparation used is syrup of pelletiérine,—one gramme per one hundred and twenty parts of syrup. From three to six doses were administered. Unfortunately, this substance is excessively dear. M. Galezowski hopes to meet this difficulty by administering pelletiérine in subcutaneous injections.

Salicylate of Lithia in Rheumatism.—Professor Vulpian recently read a communication to the Académie de Médecine advocating the use of the lithia salt of salicylic acid in the treatment of articular rheumatism of subacute character. It is efficient in smaller doses than the corresponding sodium salt.—*Bull. de Thér. Méd.-Chir.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 6, 1886.

EDITORIAL.

BANE AND ANTIDOTE.

THE time probably will never come when physicians by common agreement will confine themselves to the officinal drugs of the Pharmacopœia and their extemporaneous combinations when writing prescriptions; but should that day ever dawn, many purveyors of proprietary preparations will find their occupation gone,—greatly to the relief of a much-abused and long-suffering medical profession. Nearly every mail brings pseudo-medical journals published in the interests of enterprising manufacturers, monographs lauding certain articles to be obtained only from a single source, specimens of proprietary pills and powders, circulars, price-lists, and cards beyond number. Nearly every day the ubiquitous gentleman with a black satchel drops in at your office-hour, and, if permitted, will commit a grand larceny of your time while he grows eloquent over the superior merits of his wares as compared with any other remedy in the shops, whether proprietary or officinal. Or perchance he has some valuable work to be sold by subscription only, published in one hundred parts, and he is so obliging as to permit the subscriber to take one every two or three months, just as it suits him, feeling certain that the mind of the victim will be so engaged with the financial problem that he will not be able to work out the simple question in mental arithmetic as to the probable period when he will have the pleasure of holding the completed work in his hands.

With these two classes of visitors the patience and politeness of the physician are often severely tested. Experience shows that the interview may be terminated very briefly by informing the visitor, as blandly as possible under the circumstances, that you are as fully acquainted as you desire to be with the merits of his goods and do not care to have any samples. The little expedient of receiving such visitors standing, and with occasional glances at a timepiece, has been observed to expedite matters very decidedly; but he who stops to parley is lost, and he who sits down to listen has himself to blame if the interview be prolonged. However, there are occasions, when patients are few and the claims of practice not too exacting, when a visit from a gentlemanly drug- or book-agent may not be unwelcome, and some entertainment, if not information, may be obtained from his discourse, which, we are bound to admit, is almost invariably polite and deferential.

The same remark will not apply to the tone of medical circulars, which vary from the insinuatingly suggestive to the patronizingly dogmatic. Not only is the reader informed as to the merits of the remedy, but its therapeutical indications are pointed out, and the imperative duty of employing the especial preparation under consideration is laid upon the conscience of every prescriber.

We have before us such a communication, which is ingenuous to a degree that would be amusing were it not for the tone of insolent familiarity with which it addresses the profession upon the nature and treatment of disease. But the acme of effrontery has been recently attained by a New York firm, which has broached a scheme by which physicians are invited to sign a formal contract to employ its manufactured proprietary medicines as much as possible, and, in consideration of having thus ordered a certain quantity, the party of the second part agrees to pay a stipulated sum of money (fifty dollars) to the physician, who thus becomes merely the tool of the drug-manufacturer. It is

not supposed that many physicians will be found who would be tempted to place themselves in so dubious a position, with the certainty of exposure staring them in the face; but the very fact that such a scheme has been promulgated is an indication of the slight esteem in which the profession is held, at least in certain quarters. At present the profession seems quite defenceless against such insults; but it is hoped that when merchants find that enterprises of this kind are resented they will adopt a different course. Especially will they see the necessity of doing so if they find the former one unprofitable.

THE NATIONAL BOARD OF HEALTH BEFORE CONGRESS.

ALL concede that we should have an efficient National Health Service. It is universally acknowledged, too, that the National Board of Health has already rendered incalculable service to the country, and is able to continue that service if the necessary legislation and means are supplied by Congress. The lapse by limitation of the law of June 2, 1879, leaves the country without any law by which the government can co-operate with State and local Boards of Health in preventing the introduction and spread of epidemic diseases, except such clauses as may from year to year find their way into annual appropriation bills. Such temporary legislation is not in keeping with our standing as a nation. We should have permanent legislation, and be upon a par in sanitary matters with other first-class nations. In the matter of legislation very little improvement can be made upon the law of June 2, 1879, which by mistake was made to continue in force but four years. It contained ample provision for co-operation in times of great emergency, and for carrying forward the most useful sanitary work during periods of freedom from epidemic. The work done by the Board during the time that law was in force will stand, and will reflect lasting honor upon the nation. Leading sanitarians of Europe generously credit the Board with having, in its investigations, contributed more to our knowledge of the propagation of epidemic diseases than perhaps had ever been accomplished before.

No questions can be of greater importance than those affecting the health of the people, and the work so well begun by the Board should be continued. The possibility, too, that cholera may at an early day make its way to this country should command for the subject immediate attention. It will require time for the Board to perfect plans for the co-operation of local organizations and communities, and Congress should pass the necessary laws at once. State and local boards cannot in this day manage epidemics alone, and the Board has shown that with its aid epidemics can be speedily suppressed. It is hoped that every medical journal in the country will begin the discussion of this question at once, and urge its patrons to press its importance upon their representatives in Congress until permanent legislation, by which the Board can continue its beneficent work, is secured. If during the coming summer cholera breaks in upon us unprepared, the reponsibility will be partly ours if we now fail to bring the subject to the attention of Congress. Let, then, the question be agitated from one end of the land to the other, until our representatives are impressed with the importance of the subject and fully understand the wishes of the people. Then will the National Board be able to continue its work, and we shall have a National Sanitary Service which will be of lasting benefit to the country.

Drs. Wood and Formad did most valuable service to the country in their investigations conducted for and under the direction of the Board, and all who are concerned with the practical solution of

great problems in state medicine should naturally feel interested in having such work continued.

A PROPOSED ASSOCIATION OF PHYSICIANS AND PATHOLOGISTS.

AT preliminary meetings held last October and December in New York City, it was decided by those present interested especially in pathology and clinical medicine to organize an association having for its objects the advancement of studies in these departments of medicine in this country, to limit the membership to one hundred, and to hold an annual meeting in the month of June in the city of Washington. It was also decided to hold the first meeting on Thursday and Friday, the 17th and 18th of June, 1886, under the presidency of Dr. Francis Delafield, of New York City. During the past month the committee to whom the duty was intrusted have issued a circular-letter which has been sent to those who were selected as original members, the committee consisting of Francis Minot, M.D., Boston, Chairman; William H. Draper, M.D., New York; William Pepper, M.D., Philadelphia; R. Palmer Howard, M.D., Montreal, Canada; Alfred L. Loomis, M.D., New York; William H. Welch, M.D., Baltimore; Francis Delafield, M.D., New York; James Tyson, M.D., Philadelphia, Secretary of the Committee. It is understood that a sufficient number of replies have already been received to insure the success of the meeting.

HOPEINE.—An enterprising manufacturing firm sent to one of the prominent therapeutists of Paris a preparation which purported to be an extract of a peculiar species of hops growing in Central America, and experiments were thereupon made and published upon the valuable narcotic virtues of "hopeine." Recently, however, an analysis was made of it, with the result of demonstrating that it consisted of morphine flavored with hops, and it was so reported to the Société de Thérapeutique by M. Petit.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

CLINICAL Observations on Heart-Disease by Jaccoud.—Professor Jaccoud, of the Paris Faculty of Medicine, no longer continues his didactic lectures at the school, but devotes his whole attention to his clinics at the Hôpital de la Pitié. His numerous works include an immense Dictionary of Medicine, in some thirty-eight volumes, which is much appreciated in France, and last year one of his books on pulmonary troubles was translated into English. We give some details of a late interesting clinical lecture that he gave on "Cardiopathy," or heart-disease, considered in general.

"I am going to make a parallel before you to-day of two patients who are in the Laennec ward, both of whom are suffering with heart-disease. I take this opportunity, as it is rather a rare thing to find two cases that are capable of giving so much instruction. The woman you saw in No. 1 bed is about 75 years of age, while the one in No. 36 is 70: both of them are strong, and of a good constitution, and both are hard-working women who go out by the day. As to their antecedents there is a slight difference; for No. 1 has hardly any medical history, as far as we can learn; only had a slight intermittent fever at seventeen years of age, from which she recovered promptly. No. 36 has a much more complicated history: some twenty years ago she had a violent attack of hepatic colic, but this is not of present importance; later she had pains in the articulations and her spinal column; this detail permits us to think of a rheumatic predisposition; further, some three years ago she had an erysipelas of the face; finally, she had, two years ago, what she calls a sort of 'heart bronchitis,' which interfered with her respiration; for us there is here the first indication of cardiac trouble following an accidental bronchitis, but we must also keep in mind the rheumatism and the erysipelas.

"The circumstances that brought these two women to the hospital are different. No. 1, when in good health, a few months ago, noticed that she had the lower part of her legs swollen, particularly at night; this continued for two months, and then it occupied the whole of the lower members and became permanent. At this moment it is now nearly up to the angle of the scapula; but with all this she has never suffered any annoyance except from the mechanical effects of the swelling. The other one, some six weeks ago, suddenly and without any reason found that she could not go up-stairs without feeling great oppression; a few days later she had the same feeling even when walking on the level, and a day or two later she found her legs swollen, and came here for relief.

"Now as to their actual state. In No. 1 the augmentation of the heart is but little noticeable. On auscultation, we can hear murmurs all over the region of the heart: they are strong, rough, and grating in character. The one heard at the point of the heart is the weakest, that of the right second intercostal space is stronger and slower, and it seems to pass towards the other side. There is a third *souffle* in the region of the xiphoid appendix: this is hard, intense, and grating, more so than the others. These murmurs are all systolic. In the neck there is a venous stasis in the external jugulars, and the peripheric arteries are atheromatous: the last symptom is readily explained by the age of the patient. The pulse is remarkably regular for a heart that is apparently so seriously involved.

"No. 36 gives a quite different clinical picture. Here the pulse is quick, small, and irregular, ranging from one hundred and four to one hundred and twelve, and the exact figure is very difficult to give, as it varies so quickly: auscultation allows us to appreciate the disturbance of the heart's function, but at the same time there is not the slightest vestige of a *souffle*, and the œdema is very slight in this case.

"The state of the lungs in our two patients is quite different also. In No. 1 there is no perceptible respiratory trouble, with the exception of a few râles at the base of the lungs, evidently the result of the œdema and from the fact that she is lying down in her bed. In No. 36 there is a persistent dyspnœa, with râles in the lower half of each lung: she cannot lie down at all, but sits in bed with her head raised. As to the liver, there is the same contrast: No. 1 small, and No. 36 enormous, passing below the umbilicus. The spleen is enlarged in both cases, and the kidneys are altered. They both pass from three hundred and fifty to five hundred grammes (one pint) a day of a urine which is heavily charged with urates and a little albumen.

"It is no trouble for you now to diagnosticate two very serious cases of heart-disease; but is the gravity of these cases equal?

"It is a great error to suppose your diagnosis made when you hear an organic *souffle*, and to imagine that you have now only to find its seat and rhythm to locate the valvular lesion. *Let me assure you that the absence of a murmur does not exclude valvular lesion, any more than the presence of one indicates it.* And we have in these two cases a proof of this; for No. 1 has no lesion and plenty of murmurs, and No. 36 has no murmurs, but a very serious lesion.

"In applying the rough explanation of what we hear in the first case, it would be: systolic murmur at the apex,—therefore mitral insufficiency; same at the base,—aortic narrowing; the murmur at xiphoid,—tricuspid insufficiency. So that she would have a triple valvular lesion. But you have no right thus to make an abstraction of your medical judgment in transforming yourself into a stethoscope. Does the general state of this patient permit such a conclusion? I do not think so. First of all, I cannot find in her antecedents any malady capable of causing endocarditis. I know in aged persons it may develop itself spontaneously; but here is a case where the digestion is good, the respiration also, and it is only the œdema that prevents her going home at once; and yet, from the sounds, one would be ready to give her a triple valvular lesion. It is not at all probable.

"'Well, then,' you will say, 'why these murmurs?' The explanation is simple enough. You have only to consult the arteries, and you will soon be aware that there is a general atheromatous condition. Why should the endocardium escape this condition? It cannot escape this alteration any more than the rest of the body, and it will be thickened in a diffuse manner all over it, besides at the orifices, and this is the cause of the murmurs. Why is there this progressive dropsy? Well, I have not said that the heart is healthy. I believe that the œdema depends on the functional insufficiency of the myocardium, or the muscular structure of the heart itself. I think that the coronary arteries have been atheromatous for some time, and that the heart's substance has been badly nourished. Finally, the age of the patient allows us to suggest senile degeneration; but there is no proper lesion of the heart.

"The other woman presents, on the contrary, the influence of a diseased heart on the lungs long before the trouble in the circulation itself. She shows on the sphygmographic trace all the characters of a grave and double mitral lesion, which, as I said, can go on without any murmur. Her antecedents give us the right to place the endocarditis at the time she had the bronchitis, which was no doubt the source of the lesion, and the reason the symptoms showed themselves lately is owing to fatigue of the myocardium; and as there was a mitral lesion, it showed first in the lungs by the oppression.

"Having now arrived at a point where they both have functional insufficiency of the muscular structure of the heart, we ought to attempt to restore it; and here is the difference in gravity between the two cases. In one there is a grave mitral lesion, and any amelioration we may obtain will be of short duration; but in the other case it ought to act satisfactorily and the treatment should give good results.

"What shall we do in these cases of heart-disease? The state of the muscular structure must dominate all the therapeutic measures, and one of the most delicate questions in therapeutics is when and how digitalis should be used. It is called a heart-*tonic;* and this name alone indicates that consideration of

the contractility of the myocardium must be the important point, and this principle is so important that I have been in the habit of saying, *to know if you should use digitalis, you don't need auscultation; your hand will be sufficient.* The danger in these maladies consists in the default between the central motor—*i.e.*, the myocardium—and the obstacle to be moved,—the column of blood. As long as this action is perfect, the patients are safe, and they may have any quantity of murmurs; they will not be in any danger until the central motor diminishes. In a word, the state of the muscular structure tells you what medication is needed. I have said that the hand will be sufficient to tell you how it is; but, unless there is great experience, it will not always be sufficient to appreciate its contractility; but, however, direct auscultation with the ear will enable you to catch the slightest differences.

"In one group of cases the insufficiency will be demonstrated at once to you by the œdema, by the cyanosis at the extremities and face, and by the albuminuria. In a second group it will be more difficult; there may be no exterior signs, only a feeling of thoracic fulness, short breathing, desire to keep the head elevated, some palpitations, and that is all. But I will give you some signs to guide you: 1st, force of the heart's beat; 2d, irregularity; 3d, quickness; 4th, quantity of urine in the twenty-four hours. Here under the normal means diminution of arterial tension, and therefore of the cardiac contractions. If there is one-third less, you may be sure of insufficiency, particularly if it persists for several days.

"In both these groups there is the indication for the heart-tonics, and digitalis is at the head of them. What preparation should you use? The infusion is to be preferred, as the tinctures are very uncertain; and take the leaves, not the powder. Indicate in your formula the quantity of leaves according to the case to one hundred grammes of water; state the time of the infusion, which is twenty minutes; and add some thirty grammes of a diuretic syrup to it. No dose can be fixed, as it will vary in different cases. As a general rule, if there is no exterior sign to guide you, then 0.20 of a gramme of leaves gives excellent results. On the other hand, when asystole is established the dose must be raised, or else the patient will be fatigued uselessly, and you will arrive very quickly at his term of intolerance and have to abandon the remedy. Here give 0.50 up to 0.80 of a gramme, but commence at once at your maximum dose; do not raise it from 0.40 on up, or you will run the risk of poisoning the patient. Digitalis should never be given continuously, three days at most at the same dose; indeed, it is a much better plan to give your dose one day, and then lower it the next day, and the next, and so on; after five days, let there be a period of suspension of at least three days. If the case be very serious, use other means during the suspension. In all cases, when giving digitalis, see patients every day. If they vomit, you will recognize intolerance at once: but there are other signs to guide you: the pulse, under digitalis, should be slow and strong, and the first sign of intolerance may be a diminution in the force of the pulse, and if you disregard it and go to the next day, then the slowness will be modified, and the pulse will be feeble and rapid. That is enough; stop the medicine. Consider also the urine: it should augment in volume; if not, it is of no use to continue. Should the patient have nightmare and some hallucinations in the daytime, stop the remedy: it indicates a toxic action. In short, watch the pulse, the urine, the nervous system, and stop on the first sign and try something else; you can come back to digitalis afterwards. Next to it, in my opinion, comes caffeine, which gives the same effects as digitalis. The best form to use is the pure caffeine or its double salts, for the simple salts, such as the citrate, the hydrochlorate, and the valerianate, are unstable and unreliable. Pure caffeine is a white substance, crystalline, and is best given in *cachets* when the patient swallows well, or according to the following formula:

"℞ Caffeinæ (pure), 7 grammes;
Sodii benzoat., 7 grammes;
Aquæ, 250 grammes. M.

"One tablespoonful of this represents 0.50 of a gramme. In slight cases give 0.20 to 0.40 of a gramme in twenty-four hours. In graver cases commence at once with 0.80 to one gramme. One gramme and a half is my maximum dose.

"Is this medicine objectionable in any way? Yes; but not in the same way that digitalis is. Some patients will have cramp in the stomach, and, if you continue, will develop a gastralgia; and this will be followed by insomnia and nervous symptoms. If the intolerance be only gastric, you can overcome this by giving it hypodermically in such injections as the following:

"℞ Sodii benzoat., 2.95 grammes;
Caffeinæ, 2.50 grammes;
Aquæ destill., q. s. to make ten cubic centigrammes (about six grammes). Each Pravaz syringeful of this will contain about 0.25 gramme of caffeine.

"Or we may use this:

"℞ Sodii salicylat., 3.10 grammes,
Caffeinæ, 4.10 grammes;
Aquæ destill., same as above. M.

"This will be 0.40 gramme to the syringeful. I prefer the first of these formulæ, as it is borne better by the skin.

"Now as to the American plant, Convallaria majalis, which Professor Germain Sée has so highly eulogized in heart-diseases. I

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do not find that observation confirms his opinion: so you must not hope for too much from its use. At the same time, it may be tried, if the digitalis and the caffeine are not borne well; but don't be oversanguine as to its efficacy. Employ the leaves and flowers in an infusion, in which put a syrup, and give from one to two grammes a day,—that is to say, three or four teaspoonfuls. Dr. G. Sée now uses the active principle, as follows:

"℞ Convallamarine, 0.20 gramme;
Alcohol at 60°, diluted, 100 grammes.

"Dose of the above, two teaspoonfuls per day.

"Milk-treatment must always be added, a quart to a quart and a half per day, which may be varied, after a week, by mixed diet.

"Now, a word in closing. Your remedies, however powerful, won't act under three days, and in some of these cases you must act at once. Then give drastics to clear the circulation, if you have time; if not, in more severe cases bleeding may be called for. In extremely urgent cases give at once an alcoholic potion, to which add, if you can, a proper dose of acetate of ammonia or syrup of ether. Put sinapisms all over the body, even about the heart, while you prepare your quickest remedy, which would be the subcutaneous injection of the caffeine."

Concours for Professeurs Agrégés.—One of the most interesting sights just now in Paris, for medical men, is the *Concours de l'Agrégation* that is held at the Faculty. It will, we think, be of interest if we give some account of how Professors of Medicine are made in France. As a rule, most of the eminent professors here have commenced at the bottom of the ladder and worked up to the top. First they pass the examinations for the degrees of Bachelor of Arts and Sciences at the Sorbonne, and then they come to the Medical School, where, the following year, they pass the first examination for the M.D. After this, for two years they follow the hospitals as *stagiaires*, and dissect during the same period in the afternoons, taking up only anatomy and histology. They then pass the second examination for the *doctorat;* succeeding in which, they try for the place of *aide d'anatomie*, which allows them to give a lecture once a week on anatomy in the pavilions, and during the rest of the time of dissection they are assigned to a certain number of tables, to give instruction to the younger students under the direction of the prosector who has charge of the dissecting pavilion. They hold this office for two years, and at the same time they are externes in the morning hours at some one of the hospitals. The next step of the aspiring professor is the place of interne, which they hold for two more years, passing now the third examination. After the internat they finish the last examination and become doctors of medicine, having now been mostly seven years at study. After this they try for the place of prosector of anatomy, having charge of a pavilion, or else they become *chef de clinique*, having charge of certain wards in the hospital in the absence of the professor. This is as high as they can go before coming to the present trial for the place of *professeur agrégé*, or under-professor.

The *concours* now going on is for the purpose of choosing six of these assistant-professors, to replace those whose time has expired.

The concours takes place every three years, and they certainly call out the best obtainable talent in the country. The chosen ones serve for seven years, and deliver a certain number of lectures during that time, and at the call of the dean (Professor Béclard) they must serve at examinations and be ready to replace any professor who may be ill or absent. They wear a dark robe at examination, with the red hat of a professor. The pay is only six hundred dollars a year, with an allowance for examinations.

There are about thirty of them at the Paris Faculty, and the regular professors are elected from their ranks by a vote of the Faculty. Professor Mathias Duval, who replaces Robin, was elected by acclamation, all voting for him; but sometimes there is a long fight over it. A full professor gets two thousand four hundred dollars a year, besides allowances for laboratory and examinations. But to return to the present concours. Some twenty-nine candidates presented themselves for the six places vacant, and, to show what proofs they are being put to for the purpose of testing their knowledge and fitness, we give a hasty sketch of the proceedings.

A jury of nine professors sit in state in the grand amphitheatre at the Faculty, while the public gather on the benches. The candidates enter; then each professor drops a written question into a hat, which, after being well shaken, is passed to an elected one of the aspirants, who draws out a question and announces it. The candidates are then taken to a large empty room, where they are given pen, ink, and paper, and left to write out their ideas on the subject. When they have finished (which must be under three hours), the manuscript is sealed up, and they draw lots for precedence in reading. They then, in turn, read before the public and jury what they have written. The subject drawn this time was "Hepatic Cells." After this test, the professors each put three questions into the hat, and two of the candidates draw out one of the subjects, and they are locked up with a guard over them for three hours, when they have to come before the public and jury as before and speak three-quarters of an hour on the subject drawn. This is continued until by twos they have all spoken, each two on different subjects, as a question once drawn is

not put in again. To give an idea, the following were some of the questions treated: "Diagnosis of Progressive Locomotor Ataxia," "Acute Articular Gout," "Cardiac Kidney," "Parkinson's Malady," "Thoracic Complications in Typhoid Fever," "Cancer of the Uterus," etc.

This second trial having terminated, the jury then vote to see how many of the candidates are fit to continue on to the final trials, and of the twenty-nine now up twenty were allowed to go on. The final trials are something the same, except that the candidates are not locked up. The third trial is on questions drawn in the same way, but on much more difficult subjects, and here they are allowed twenty-four hours to prepare before talking one hour on the subject. The concours ends by the candidates writing a thesis on a given subject, and the jury proceeds to elect those who they think are the most fit for the places.

The ability displayed at the impromptu trials, where the candidates can have no help from any source, is astonishing. They cannot know on what subject they may be called upon to speak, and it shows a wonderful display of medical knowledge and the advantage of a thoroughly well grounded medical education. It is by this system that France has endowed science with so many remarkable men from Bichat to Claude Bernard, and up to the distinguished men of the present generation.

Intra-Parenchymatous Injections in Pulmonary Phthisis.—Dr. Gouguenheim spoke lately at the Société Médicale des Hôpitaux on the treatment of phthisis by intra-parenchymatous injections of a solution of corrosive sublimate. He said that several American authors had proposed such injections, but that most of them would not use the sublimate, fearing danger. Late experiments that he had made, however, prove that this exclusion is not justified. The needle used must be longer than the one used with the hypodermic syringe, and it must be inserted into the first or second intercostal space in front. On the right side also it can be placed or introduced in the third interspace. From the posterior part of the trunk it is too difficult. Care must be taken to avoid the large venous trunks, and to press the piston down slowly, also to cover the needle with a coating of carbolized oil. With these precautions, injections of this sort may be practised without the slightest danger or fear of local accidents.

The solution made use of, where the case was that of tuberculous infiltration, was a weak one of 1 to 2000. A stronger solution, of 1 to 1000 or 1 to 500, was reserved for cases of softening or in excavations or caverns. Not more than one syringeful was used at a time, —say about one gramme of liquid, which contained from one-half to two milligrammes of sublimate.

The operation was not at all painful. When cough followed, the treatment was at once suspended. The patient was instructed to be silent during and for some time after the operation. Hæmoptysis was exceptional and transitory in character, but if it came on the treatment was stopped at once. The advantages derived were: a considerable improvement in all the signs given on auscultation, a diminution in the expectoration, and in thirty-three cases treated twenty-one were much improved and the rest slightly so. All the usual methods of treatment for phthisis were used also; and it will be of interest if we add that the medicinal treatment recommended here is that adopted by Professor Peter, and given by him the other day in his present course of lectures on tuberculosis. It is, in brief, as follows: small doses of arsenic for three days; the same of sulphate of quinine for the following three days; and during these six days white cod-liver oil is to be given; then rest on the seventh day, or no treatment once a week, with the usual hygienic treatment for the skin of lotions of cologne and water or plain cold water and careful rubbing down daily.

Professor Panas has again something to say about antisepsis in eye-surgery, principally in the treatment of cataract. The principles that guide him are, first, to make use of an antiseptic that is *sure* and *not irritating* in its action; then the liquid used must be pushed into all the corners of the field operated upon; next, a very complete cleansing of all blood, iris-pigment, and air-bubbles must be carefully made, while the iris itself should be reduced and completely contracted; afterwards the dressing applied should be strictly antiseptic, and the eye kept in repose a sufficiently long time.

Of all the antiseptics which he has used during the last two years, Dr. Panas has now definitely adopted a solution of the biniodide of mercury, in 20 to 1000 solution. Even in 40 to 1000 this salt possesses a very strong anti-fermentative power, so that at double the strength nothing should resist it: at least such is the experience in the eye-clinic of Professor Panas at the Hôtel-Dieu. The following is the formula adopted there:

℞ Hydrarg. iodidi rubri, 5 centigrammes;
Alcohol at 90°, 20 grammes;
Aquæ destill., 1 litre. M.

The salt is first dissolved in the alcohol, and is then thrown quickly into the water. This solution does not produce the slightest irritation of the conjunctiva, and is well tolerated by the cornea and the iris.

As to the other antiseptics used: boric acid is not irritating, but its antiseptic power is doubtful. The bichloride of mercury is more irritating than the biniodide, and its antiseptic power is not half so great. The same can be said for the "Sattler" solution. The instrument

used to wash out the eye is similar to the little drop-counter, with a rubber tube attached.

THOMAS LINN, M.D.

PARIS, FRANCE, January 18, 1886.

WASHINGTON.

AN active effort will be made during the present session of Congress to secure legislation to give the medical staff of the navy a status somewhat similar to that held by the army medical corps. In the army, the medical officer enters the service with the rank of first lieutenant, having all the privileges and emoluments of an officer of the same rank in the line. In the navy, on the other hand, the newly-appointed assistant-surgeon is placed on a level with the young fellows who have just graduated from the Naval Academy, and is denied by naval etiquette and regulations that position among the commissioned officers of the line to which his education, age, and responsibilities entitle him. That this unjust discrimination operates to the disadvantage of the naval medical service is made manifest by the fact that while there are now about fifteen vacancies in the naval medical corps, and no properly-qualified applicants for the position, there are no vacancies in the army and any number of candidates. It is hoped by the advocates of the measure which has been presented in Congress that, in the impending reorganization of the navy, the just claims of the medical corps will not be overlooked.

It is believed that the bill providing for the appointment of a commission to investigate the trustworthiness of yellow-fever inoculation as a preventive of that disease will pass both Houses of Congress without difficulty. The House Committee on Commerce, to which the bill was referred, has reported unanimously in its favor. The Senate Committee on Epidemic Diseases, of which Senator Isham G. Harris, of Tennessee, is chairman, is also committed to the support of the bill.

The bill, as reported by the House Committee, provides for the appointment of a commission of three experts, two of whom shall be officers in the government service and one from civil life. One member of the commission shall be especially skilled in methods of bacteriological research, while the others are required to be experts in the diagnosis and treatment of yellow fever. Twenty-five thousand dollars are appropriated to carry out the objects of the bill. There are no two opinions as to who the first member of the commission should be, Dr. George M. Sternberg, of the army, being named as the most appropriate choice for that place. The other government officer will probably be taken from the marine hospital service or the navy, while Dr. Holt himself or some other member of the profession in New Orleans will probably be chosen as the member from civil life.

Unexpected opposition to the commission has developed in the very place where it would be least expected,—namely, in New Orleans. The *New Orleans Medical and Surgical Journal* has editorially pronounced against the passage of the bill and the appointment of the commission, on the grounds that the truth of the claims of Freire and Carmona is not established, and that the amount of money asked for is too large to waste in such an investigation. The source of the opposition of the New Orleans journal and of some active lobbying against the bill in Washington has been traced by Dr. Holt to the National Board of Health, which thinks the investigation should be conducted under its auspices and direction. As above stated, however, the impression among those best informed is to the effect that the bill will pass, especially as President Cleveland and Secretaries Bayard, Manning, and Lamar had endorsed the propriety of such an investigation as is provided for in the bill.

The Second Controller of the Treasury recently stopped the accounts of Dr. Billings for expenses incurred during his attendance upon the International Medical Congresses at London, the Hague, and Copenhagen. The technical point made by the Controller was that the Secretary of War had no authority to order an officer to perform duty in a foreign country, and that hence the government could not be held responsible for any expense incurred while obeying such an order. The injustice of such a decision becomes manifest when it is considered that a refusal to obey any order of a lawful superior would render the officer liable to court-martial, while its execution leaves the head of the department entirely irresponsible and fixes the liability upon the officer obeying the order. Dr. Billings has appealed for a reconsideration of the decision, which it is to be hoped will be granted. It would not only be a flagrant injustice to Dr. Billings, but an insult to the dignity and honor of the profession, to mulct the former in the sum stopped against him by the Controller's decision.

Congress will probably authorize the republication of the Medical and Surgical History of the War, the edition of which is exhausted; and it is hoped also that another edition of the Index-Catalogue will be reprinted. The six volumes already issued are entirely unobtainable except in some old-book stores, where they are held at from four to six dollars per volume. This work could be reprinted at a cost of about two dollars a volume; and Congress should promptly make the necessary appropriation for this purpose. About one-half of the seventh volume of the catalogue is in type.

The foundations of the new medical mu-

seum building are laid to the height of the ground-floor, and work will be resumed as soon as the weather permits. The building will probably be under roof before next winter.

At the Army Medical Museum, frozen sections of the body are now being made with success. This method of making sections of the cadaver should be introduced wherever anatomy is taught, as it renders instruction in this important and difficult branch much more easy and accurate than under the present system. G. H. R.

February 13, 1886.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

A STATED meeting was held at the Hall of the College of Physicians, January 20, 1886, Dr. R. J. Levis, President of the Society, in the chair.

A CASE OF APHASIA, WITH HEMIPLEGIA, HEMIANÆSTHESIA, HEMIANOPSIA, AMBLYOPIA, AND LOSS OF TASTE, HEARING, AND SMELL, ON THE AFFECTED SIDE.

Dr. H. C. Wood: "I present to-night a very unusual case. I have been unable to learn much of the previous history. I have found out that he was a soldier in the regular army and was discharged on account of physical disability. At present he is a patient in the Philadelphia Hospital. From the War Department I have learned that he has been sick for a long time with troubles which at various times have been diagnosticated as typho-malarial fever, paralysis, hemiplegia, aphasia, etc. Although the man possesses some intelligence, we have been unable to obtain any reliable information from him, on account of the aphasia and more or less agraphia. The loss of the power of speech is undoubtedly true aphasia, and not aphemia. There is no distinct paralysis of the face, and comparatively little paralysis of the tongue. It is apparent that there has been paralysis of the face at one time. His statements would indicate that this trouble came on suddenly; but this is doubtful. The lines on the right side of the face are less pronounced than those on the left. There is distinct loss of power in the right arm, and slight loss of power in the right leg. The man's statements indicate that at one time he was very profoundly hemiplegic. There is nothing remarkable in the coexistence of aphasia and right-sided hemiplegia.

"I find, however, on sticking a pin into the skin, that there is distinct anæsthesia of the right side of the body. It also appears that there is loss of the power of tasting on both sides of the tongue. There is also distinct loss of smell. The hearing on the right side is also very defective.

"On examining the eyes, we find, in the first place, amblyopia in both eyes, but more marked in the eye of the affected side. There is also nasal hemianopsia in both eyes. The cause of the amblyopia is probably not the lesion in the brain, but it results from the atrophy of the optic nerves, and, undoubtedly, earlier in the case there was choked disk. The atrophy of the optic nerve is most marked on the right side.

"The question is, Where is the lesion, or lesions, if there are more than one? There are various lesions which will affect vision, and there are various lesions which will affect motion, but there is only one known lesion that will produce aphasia, or at least the region in which lesion will produce aphasia is a very narrow one. We know that lesion of Broca's convolution, or the island of Reil, may produce aphasia on the left side. Immediately beneath Broca's convolution, in the outer part of the external capsule, there is a little mass known as the claustrum. A lesion sufficiently large at this point may produce paralysis of motion and also aphasia by tearing up the island of Reil from the gray matter beneath. In the two or three autopsies I have made when there has been aphasia with pronounced hemiplegia, the external capsule has been involved in the neighborhood of the claustrum. If we had only aphasia and hemiplegia, we might suppose that there was such a lesion; but we also have hemianæsthesia and disorder of all the special senses. The course of the sensory fibres through the brain is very imperfectly understood. We know, however, that they pass through two or three places. From the optic thalamus the fibres radiate outward, passing to the posterior part of the brain. We know from pathological studies that at a point between the corpus striatum and the optic thalamus the sensory fibres come together, so that a lesion involving the posterior part of the internal capsule would cause hemianæsthesia and disorder of the special senses. A lesion in the posterior portion of the optic thalamus will do this.

"A possible explanation of this case is that the man has two lesions in his brain,—one in the neighborhood of the claustrum, and a second in the position which I have just indicated, in the internal capsule, perhaps involving the optic thalamus itself.

"Another possible explanation is that the whole lesion is cortical. A large clot forming on the surface of the brain might so press upon the ascending frontal convolution as to produce general paralysis of the opposite side, and this clot, extending into the fissure of Sylvius, might press on the island of Reil. Again, I believe that it is fairly proved that this posterior portion of the brain, the occipital lobes, is connected with sensation, and

pressure in this situation might produce hemianæsthesia and paralysis of the special senses. It seems to me, however, that a clot affecting the superficial surface of the brain in such a way as to produce the symptoms here present would have to be of such a size as to be followed by more marked degeneration than is here evident.

"Dr. Dreschfield has reported a case with symptoms similar to those which this man presents, and at the autopsy the lesion was found in the position which I suppose it to occupy in this case,—viz., in the neighborhood of the claustrum and external capsule, and in the internal capsule near the optic thalamus, posteriorly."

Dr. Dercum: "It seems to me that the supposition of two lesions is unnecessary. It is well known that a hemorrhage in the internal capsule, if large enough, may destroy a portion of the corpus striatum and effect pressure on the claustrum. It is also known that in hemiplegia we have sensory symptoms in direct proportion to the extent to which the clot extends backward."

Dr. Charles K. Mills: "It seems to me that one lesion is sufficient to explain the symptoms in this case. I have seen hemiplegia with aphasia where the lesion was in the external capsule; but there has always been more than this. The lesion, if not cortical, is usually one involving the width of the internal capsule, and sometimes the lenticular nucleus. Hemiplegia is certainly a result of this lesion, and it is still a question whether aphasia may not be.

"Dr. Wood is mistaken in saying there is only one such case on record. I have reported a case which was under my charge in the Philadelphia Hospital in 1883, and which was published in a lecture in the *Medical and Surgical Reporter* (February 23 and March 1, 1884), a case almost the counterpart of that described to-night. I did not, however, determine whether or not hemianopsia existed. In that lecture I also quoted a case by Müller in which the same symptoms existed, and in which the results of an autopsy were given. The lesion in that case was as follows: a circumscribed focus of softening, the size of a pea, was found at the apex of the third division of the external part of the lenticular nucleus and adjacent white matter. The report does not state whether the external or the internal capsule was involved.

"Pierrot has reported thirteen cases of hemianæsthesia with most if not all of these symptoms, in which the lenticular body and the adjacent part of the internal capsule was affected. This was in 1883; and more cases have been reported since then.

"I should think that in this case the lesion would probably be in some special position of the posterior part of the internal capsule, probably involving also the lenticular nucleus.

"One of the most interesting practical points in connection with a case of this sort, and one on which Dr. Wood has not touched, is that of the differential diagnosis from hysterical hemianæsthesia. Omit the aphasia: suppose the lesion to be on the other side of the brain, you would then have almost everything present in the hysterical case but the aphasia. In the hysterical cases you have hemiparesis, hemianæsthesia, including under this term changes in the special senses. In organic cases we have a history of some form of apoplectiform attack, with temperature-changes, peculiarities of respiration, and various other symptoms. The preceding history is one of the elements in the diagnosis. The case of Müller to which I have referred presented exactly the same symptoms as have been described, and in that case there was a single lesion at the apex of the lenticular body. The case appeared to have been carefully studied."

Dr. H. C. Wood: "In regard to what Dr. Mills has said, I may reply that if you discuss this case with the aphasia left out, you do not discuss this case. You discuss some other case. You might as well ask me to discuss night with the darkness left out.

"With reference to the cases to which he has alluded, so far as my knowledge goes, the aphasia was left out. Every day we see aphasia associated with hemiplegia, and not infrequently hemianæsthesia associated with hemiplegia. The peculiarity is that in this case we have all these associated.

"I think it possible that Dr. Dercum may be right in his explanation; but there is no way to prove it. It is a mere question of probabilities; and it seems to me improbable that a hemorrhage of sufficient size to produce these symptoms could occur without permanently destroying the whole brain-function and being followed by degeneration of the whole hemisphere. This is the reason that it seems more probable to me that there are two lesions.

"The difficulty of diagnosis is augmented by the absence of history. If the case had been watched in its development, and we had known whether the aphasia developed suddenly or gradually, and the other symptoms came on *pari passu*, it would be possible to be more positive. If the man were stricken down with a tremendous apoplexy, which threatened life and from which he escaped by a miracle, the symptoms would probably be due to a large hemorrhage. If, however, as the history would indicate, the symptoms developed gradually, the probabilities are in favor of two lesions.

"If there are two lesions, the case is probably syphilitic. Numerous foci of disease in the brain are very prone to be the result of syphilis. The occurrence of choked disk, with atrophy of the optic nerves, would point to a progressive lesion.

"So far as hysteria is concerned, I suppose that the Society has already heard enough from me to-night, and, as others are waiting to address the Society, I shall not enter upon the discussion of the diagnosis between organic and hysterical anæsthesia, as it has no immediate bearing upon this case, in which the presence of lesions is very evident."

Dr. Frank Woodbury: "Would not a single lesion in the posterior cerebral lobe, extending forward, explain the hemianopsia, hemianæsthesia, and hemiplegia? I would also ask the lecturer if, knowing as we do that aphasia may occur without any gross lesion and with only transitory symptoms, he would consider it necessary to assume a separate lesion to account for the aphasia."

Dr. H. C. Wood: "A lesion in the posterior lobe might produce the symptoms mentioned. I doubt whether there ever was a case in which there was complete permanent aphasia without organic changes. I once reported what was apparently such a case; but I found, on microscopical examination, degeneration of the centres."

PHILADELPHIA NEUROLOGICAL SOCIETY.

STATED MEETING, JANUARY 26, 1886.

(Continued from page 396.)

DR. H. C. WOOD reported

TWO CASES OF SYPHILITIC DISEASE, THE LESION IN ONE INVOLVING THE ASCENDING FRONTAL CONVOLUTION, IN THE OTHER THE CERVICAL SPINAL CORD.

The first of these cases is of special interest, because, so far as the motor symptoms are concerned, the situation of the lesion closely agrees with the modern doctrine of cerebral localization, whilst no lesion was found to account for the loss of sensibility. The only explanation that could be given of this is that disease had existed in the membrane over the angular gyrus and had been removed under the influence of the mercury, there being no record as to the condition of sensation just previous to death. This explanation seems, however, rather lame, because more distinct traces of such lesion would naturally be expected. The cases are also of interest as illustrating a danger which always overhangs a person suffering from syphilitic epilepsy,—namely, possible arrest of respiration during the convulsion, and consequent death.

Case I.—R. B., male, aged 50, entered the Nervous Ward of the Philadelphia Hospital January 2, 1885. The following extract is taken from the case-books of the institution: "R. B. says that his health has always been good, and, whilst acknowledging that he had chancres twenty-five years ago, denies all other forms of venereal disease. Eight years ago he fell down-stairs and struck his forehead just above his left eyebrow: he was picked up unconscious, and remained in that condition for four hours. One week after his fall he returned to work, but was troubled with a feeling of lightness in his head and vertigo. About two weeks after this he suddenly felt a peculiar pricking sensation in his right foot, which extended rapidly up the leg to the thigh, and finally to the right arm, and thence to the head, and was immediately followed by unconsciousness. He has never bitten his tongue in this or in any subsequent attack. The convulsion was followed by a period of stupor or sleep. About two weeks after, there was a second epileptic attack, without any aura or other warning. His arm, which had continued in a numb condition ever since his fall, for a time grew steadily worse; for one year its condition then remained unchanged. He still had epileptic attacks at intervals varying from a few weeks to a few months. Eighteen months ago he had an apoplectic attack, in which the unconsciousness lasted for several hours. There was no ensuing paralysis, nor did his health seem to be the worse for the sickness. He states that he now has, at about monthly intervals, attacks of epilepsy. These attacks are preceded by a peculiar twisting of the fingers of the affected hand, and followed by stupor or somnolence, lasting for about twelve hours.

"*Present Condition.*—There is partial motor paralysis of the right hand and arm. With the left hand he moves the hand of the dynamometer to ninety-five; with the right only to thirty. The æsthesiometer-points, separated to their widest, are felt on the right hand and arm only as one; on the left arm the points are separated on the ulnar and radial side at two and a half centimetres apart; on the palmar surface at four centimetres. He has not as good use of his right leg as formerly, although there is no complete paralysis of any of its muscles. Patellar tendon reflexes normal. Ordered potassium iodide in increasing doses.

"*Treatment.*—January 6, 1885. According to statement of nurse, in his fits the patient works altogether with right side. Left pupil slightly smaller than right. Perceptible weakness in right face. Dynamometer: right hand, forty-six; left hand, eighty-seven. In neither thigh is there any difference in sensitiveness. He complains a good deal of frontal headache. Edges of optic disks sharply cut, and optic disk itself abnormally white, believed to be atrophic. Ordered to be ptyalized.

"The patient was ptyalized, and afterwards was given the iodide very freely; but, notwithstanding there was distinct improvement in regard to headache and general condition, the fits continued, although at longer intervals, and on May 9 there was prolonged unconsciousness after a fit, ending in death.

"*Autopsy.*—Contents of thorax normal, except as to congestion; liver is large and congested, indurated, capsule thickened. In the tissue between the right and left lobes, anteriorly and near the lower edge, is a distinct gummous tumor of the size of a hickory-nut. The new growth has developed from the capsule and grown inward. Upon the upper border of the same fissure and posteriorly is a scar, evidently a healed gumma. Kidneys congested, but otherwise normal. Rest of organs normal.

"Brain: When the skull-cap was removed, some ounces of black blood ran out. Membranes much congested everywhere. Dura mater normal, except in being abnormally adherent to the edges of the great fissure.

"Left hemisphere: Arachnoid and pia mater abnormally thick, especially superiorly, and somewhat opaque. Vessels somewhat congested. On external inspection of the bared convolutions, nothing abnormal is observed, except about the middle of the ascending frontal convolution, where, at a spot one-half inch in diameter, the membranes were fused with the brain-surface and could not be separated. The tumor is one-third of an inch in thickness, and, in tearing it out, a definite cavity was left. No other lesion discoverable in any part of that hemisphere. Remainder of brain normal in general structure.

"Cause of death, œdema of the brain from cerebral syphilis."

Case II.—Cadamomi, aged about 22, entered the wards of the Philadelphia Hospital June 1, 1885. As he was an Italian of very low order of intelligence, no detailed history of his case could be obtained. He stated, however, that he had been well and strong until three months before, when he had been hurt in the upper part of the back, and had not been able to work since. One month before entrance he had rapidly lost power in both arms.

His condition at the time of entrance to the hospital was as follows. He is unable to stand, and entirely confined to bed, but can make feeble and slow movements of the thighs, legs, and feet, all muscles seeming to be about equally implicated. The whole of the left arm is paralyzed except the thumb, which can be moved slightly. In the right arm, the deltoid and the flexors of the fingers are much wasted. There is no paralysis of the face; patient cannot turn in bed, but has not lost control of the bladder and of the rectum; sensation is not much affected; pain is complained of in the back and side of the neck, and in the limbs, especially in the arms; marked pain in the sternal region on coughing; pressure of the lower cervical vertebræ causes severe pain, and forcible jarring of the head also produces pain in the lower cervical spine; cervical vertebræ not distinctly prominent; patellar reflex somewhat exaggerated; temperature normal; bowels persistently very costive.

The patient was put upon a water-bed, and iodide of potassium given in rapidly-increasing doses, until a hundred and eighty grains a day were taken; but the symptoms gradually increased, paralysis became more marked in the lower extremities and complete in the arms, power over the bladder and rectum was lost, and the patient died June 18, seventeen days after his entrance into the hospital.

The autopsy was confined to the vertebral tract. "In the lower cervical region, extending into the upper dorsal, is a thickened mass, several inches long, not at all separable from the membranes of the cord. The outer portion of this is formed of a uniform structureless basis, filled with numerous long, narrow, curved cells, evidently derived from connective tissue. Within, this mass is chiefly composed of innumerable small, round, closely-packed cells, sometimes arranged in irregular, diffused masses, but in many cases collected into globular masses, which are only in rare instances distinctly separated from surrounding tissue. A few of these masses were yellow, the cells evidently undergoing fatty degeneration, and not taking staining at all.

"Cord underneath the tumor chiefly composed of a structureless, minutely granular, neuroglia-matter, with numerous roundish neuroglia-cells. No nerve-tubule discoverable in section. Gray matter affected nearly as much as white; ganglionic cells still present, although most of them much altered."

The following report was made by the committee appointed to inquire into the

METHODS OF SLAUGHTERING CATTLE,

and the question as to whether cattle suffer from witnessing the slaughtering of companions.

"Your Committee have the honor to report that they held a meeting at the Philadelphia Abattoir and witnessed the slaughter of a number of cattle. As the arrangement of the building and the methods employed have been fully described to the Society in the paper of Dr. Hinsdale, it does not seem necessary for your Committee again to go over this ground; and the Committee confine their report to answering the questions proposed by the Society for the Prevention of Cruelty to Animals. We find, in the first place, owing to the unskilfulness in the use of the hammer by the butchers, that perhaps in the majority, certainly in a very large proportion, of the cases, the animal is not rendered permanently unconscious by the first blow. In a number of instances the creature, when struck, either failed to fall or simply went down upon his knees and rose again, and had to be driven around the pen, and sometimes struck again and again before falling. Further, it is the habit of the place

to strike down several bullocks one after the other, so that one or two of the animals must lie on the ground some time before the throat is cut. In very many instances the creature seems partially to recover its senses during this time, and in some cases undoubtedly becomes perfectly conscious, and even gets up upon its feet. There can be no doubt, therefore, that a large amount of unnecessary suffering is produced in the killing as practised at the Philadelphia Abattoir.

"A properly-directed and sufficiently powerful blow undoubtedly will immediately put an end to consciousness. It is not the general idea of the method of killing which is at fault at our abattoir, so much as the unskilful way in which it is performed. If the animal were driven into a narrow pen, so as to insure quiet and a perfect opportunity for a blow, and if, at the same time, the hammer were heavier than the one now used, and were employed only by a skilful person, nothing more could be desired. In our opinion, there should be one man whose sole duty it is to strike down the animals, since only by repetition can perfect skill be acquired.

"We believe that there is a certain amount of psychical suffering induced by the present method. The animals evidently have a sense of danger, although they apparently do not recognize the point from which the danger is coming. The need for the appointment of some one who shall inspect the carcasses of the slaughtered animals was very well shown by the fact that in one of the beasts killed during our stay the liver was full of hardened nodules of a whitish color, and many of the lymphatic glands were evidently affected with the same disease. So far as gross appearances could determine, the animal, when killed, was in the advanced stages of tubercular disease of the liver. The nodules have been referred for examination to well-known microscopists, whose report we hope to hand in accompanying our own."

After the reading of the report of the Committee, on motion it was accepted, and the Committee were requested to present the matter, on behalf of the Neurological Society, to the College of Physicians of Philadelphia.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held February 18, 1886, the President, A. JACOBI, M.D., in the chair.

RHEUMATISM IN EARLY LIFE.

Dr. H. D. CHAPIN read a paper in which he gave the chief features of a series of seventy-six cases of rheumatism in early life which had come under his own observation. He also referred to the views of different authors as to the frequency of this affection in early life. While most authorities admitted that it might occur, the majority appeared not prepared to consider it a common affection in infancy. Of Dr. Chapin's list, one patient was aged only six months, another eleven months, and a third twenty months; there was one aged three years, and two aged four years; the oldest was seventeen years of age.

Heredity was recognized as a causative factor in a large number of cases in which definite information could be obtained on this point. Most of the cases of rheumatism in early life occurred in girls. He had no explanation for this fact. The lower extremities were most frequently affected, particularly the knee. There was more likely to be soreness on exercise rather than actual pain. Swelling and redness of the joints were absent in most cases. There was a repetition of the attack in a large number. A very general feature was marked hydræmia; and this was an important factor in diagnosis and treatment.

Of the seventy-six cases, twenty-six had rheumatic valvular disease, in most instances there being a mitral regurgitant murmur. This was the proportion found by Senator. He thought the heart was more often slightly affected by endocarditis in mild attacks of rheumatism than was generally supposed, but there might remain no permanent lesion. He thought acute endocarditis usually gave rise to less constitutional disturbance in children than in adults, and it was liable to be overlooked. He once presented at the Pathological Society a heart in which all of its structures were so affected as to be nearly destroyed from an attack of rheumatism which was so mild as to have passed for "growing-pains."

Regarding the relation of chorea and rheumatism, he had once published a paper on this subject, and his belief had been confirmed by more recent observations. In thirty-five cases of both rheumatism and chorea the majority of the cases first showed rheumatism; a few first manifested chorea. He had four cases of chorea with a cardiac lesion in which there had been no rheumatic attack.

Tonsillitis was present just before, at the time of, or just after the attack of rheumatism in nineteen cases. It was not proved that this was more than a casual connection. Rheumatism was sometimes accompanied by various other affections. He had been unable to recognize any difference between the rheumatism accompanying scarlet fever and ordinary attacks.

The diagnosis must be made from a collection of symptoms. We should exclude the pains of over-exercise and those of injury.

Regarding the lactic-acid theory of the causation, Dr. Chapin was disposed to regard it as the correct one, and pointed to the fact that many of these patients had poor digestion and acid fermentation of food, and in treatment it was important to regulate the

diet and general hygiene. He thought children were apt to receive too much sugar and starchy food. As soon as a child complained of pain, especially if there was a family history of rheumatism, attention should immediately be given. It should be placed in a warm room, and salicylate of sodium should be early administered, thus preventing the occurrence of heart-complications. If these should occur, it was of the greatest importance that the child should be restrained and exercise secured. There should be subsequent tonic treatment, for most of this class of patients were ill nourished. They should have a prolonged course of iron and cod-liver oil, and occasionally other tonics.

DISCUSSION.

Dr. JOHN C. PETERS thought the largest number of cases of acute rheumatism in children were unattended by any visible joint-complication, the child simply complaining of pain in the muscles and soreness on being lifted. If the heart became affected there would often be evidence of it on examination long before the child would call attention to distress in that region. There was also evidence of valvular disease in a large number of cases of chorea, an affection which was often seen in rheumatic children. Dr. Peters had been accustomed to recognize many inflammations of mucous membranes as rheumatic manifestations. He thought the acid theory of rheumatism the true one, but as to what was the nature of the acid we were not so certain. He had sometimes thought that formic acid had as much to do in the causation of chronic rheumatism as had lactic acid. In the treatment he used salicylate of potassium in preference to salicylate of sodium, and he also made use of potassa baths. To rub the child with fine chalk certainly made it feel comfortable. For the anæmic state he gave tartrate of iron and potash. He believed a large number of cases of nephritis were essentially rheumatic affections.

Dr. J. LEWIS SMITH continued the discussion by a brief paper, in which he gave the points of chief interest connected with seventy-three cases of rheumatism in early life which he had seen during the past fifteen years. As to the *materies morbi*, whether it was lactic acid or something else, he thought observation proved that an attack of rheumatism was most likely to occur after exposure to cold or change of weather, scarlet fever, and in those whose family gave a history of rheumatism. One attack seemed to predispose to another.

Rheumatism occurred rarely before the second year of age, but there was no doubt that it did sometimes occur as early as the sixth month. In most instances it was a mild disease, the child not being confined to bed. It was less painful than in the adult, and was seldom accompanied by so much swelling and redness. In many cases swelling and redness were not appreciable. Many mothers mistook it for growing-pains, and looked upon it as a favorable indication. Occasionally, instead of commencing in the joints of the lower extremities and travelling upward, it commenced in the upper extremities and travelled downward. This was especially true in scarlatinal rheumatism.

Rheumatism in children was a dangerous disease, on account of the liability to affection of the heart. In many cases the endocarditis occurred as early as the second or third day, and in some instances it was present before the child complained of the disease in the joint. The mitral valve was most frequently affected. The action of the heart was usually sthenic. The fact that the myocardium was usually not attacked and the action of the heart was strong, was conservative in more ways than one. Pericarditis was much more rare.

As to the connection of chorea and rheumatism, in thirty of a series of sixty cases of chorea there was a history of rheumatism in the patient or immediate relatives. Dr. Smith emphasized the importance of early diagnosis and treatment in order to combat heart-complication. He believed that the treatment with salicylate of sodium was often begun too late, and that the drug was administered in too small doses. It acted less as a specific if the disease had continued several days than if it were given during the first, second, or third day. He would administer ten- or even fifteen-grain doses of salicylate of sodium to a child four or five years old.

As to lactic acid in the system from imperfect digestion being the cause of the affection, he doubted it, because rheumatism seldom occurred in young infants, whereas these were most troubled from acid fermentation of food.

Dr. MALCOLM MCLEAN thought there was nearly always an hereditary history of rheumatism, and that most cases of rheumatism in early life appeared in girls. Perhaps clothing and muscular activity would account for the less frequent occurrence of the disease in boys. He emphasized the importance of "growing-pains," which he believed to be invariably rheumatic. He usually found pain in the hamstring muscle and calf of the leg. He had noticed accelerated heart-action in cases in which no murmur could be appreciated.

Dr. L. E. HOLT thought the diseases of adults commonly had their analogues in children, and rheumatism, as had been shown by this discussion, was not an exception. He had not seen more than half a dozen cases of rheumatism in children in which there was swelling, redness, and pain, and the marked symptoms of the disease as it appeared in adults. But if the symptoms described by Dr. Chapin were to be considered rheumatic, then the disease was common in early life.

Dr. KETCH had seen quite frequently cases of hip-joint disease, and even of Pott's disease of the spine, in which he had succeeded in tracing a distinct history of rheumatism in the parents. He thought the question of the relation of rheumatism and chronic joint-disease had not received sufficient attention from specialists in orthopædy.

The PRESIDENT said he had been expected to participate in the discussion of this subject, but the lateness of the hour would prevent. He, however, made a few remarks, and referred to a monograph relating to this subject published by him about nine years ago, and which Dr. Chapin had mentioned. As to "growing-pains," he thought they were frequently rheumatic. There were some cases, however, in which the pains complained of were properly growing-pains, as they occurred in cases of rapid development of the epiphyses from physiological hyperæmia, and often in children just recovering from scarlet fever or other acute disease. He did not have in mind those cases in which there was a rachitical diathesis. There were also some cases of pains about the joints rather than in them which were due to a neurosis, and not to rheumatism. As to cardiac murmur disappearing in after-years. he had witnessed a number of cases of that kind. Rheumatic murmurs rather than endocardial murmurs might also disappear within a few hours or a few days after their recognition.

Dr. SELL referred to a case in which a cardiac murmur which had been present in a young lady disappeared later in life.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, FEBRUARY 22, 1886.

The President, DANIEL LEWIS, M.D., in the chair.

THE PRESENT AND FUTURE WATER-SUPPLY OF NEW YORK: ITS SIGNIFICANCE AND DANGERS.

DR. JOHN C. PETERS read a paper on this subject, employing diagrams to illustrate the chief points. The paper was based on the investigations of the Committee on Hygiene. The Croton water-shed covered an area of three hundred and thirty-nine square miles; the Croton River, from which the water-supply of New York was obtained, had three heads, which began in lakes, twelve or fourteen in number; some of these lakes had been dammed, and held a reserve water-supply, but not a sufficient amount. One plan was to dam the other lakes; but Dr. Peters said this was impracticable with some, and the expense would be great. The present Croton River dam was old, and the aqueduct was strained in carrying ninety or a hundred million gallons of water a day. The new aqueduct now building would be capable of carrying three hundred millions a day. The Croton River, for a distance of some miles from its outlet into the Hudson, passed through a deep gorge more than a quarter of a mile in width. It was proposed to build a dam across this gorge at Quaker Bridge, the dam to be one thousand two hundred and fifty feet long, two hundred and seventy-seven feet high, and one hundred and twenty-six feet thick at the base. The sides and bottom were of natural rock.

Dr. Peters said the best engineers admitted that it was possible to construct such a dam and make it secure, but the greatest opposition was from those who claimed that the water would become stagnant, that the dam would cost twelve or fifteen millions, and that it would take many years to complete it. Dr. Peters thought it could be constructed for from three to five million dollars, and that it could be completed in three or four years, although there were good engineers who claimed it would require eight years. As to the water becoming stagnant and impure, he thought there was little danger of it; besides, sluiceways would be provided for letting impure water out if it became necessary to do so. At present there was more than the amount of water from the Croton River used by the city going to waste, and some days the waste was eight hundred million gallons, and at other times a sufficient waste took place in a day to supply the city with water for eighty days. It was of the greatest importance to dam this water, so as to be prepared for a drouth.

It was also proposed to build a dam called the Sodom dam, which could be completed in a much shorter time and at much less expense; and the committee recommended that this be built at present, and that the Quaker Bridge dam be commenced as soon as practicable.

The other proposed methods for supplying the city with water were, to use the water from Bronx River; but that would amount to only ten million gallons a day, and the expense to obtain it he claimed would be greater than the expense of building the Quaker Bridge dam; another, to bring the water from Byron River, Connecticut; another, from the Adirondacks; another, to dig wells; still another, to use salt water for washing streets and putting out fires. None of these methods, however, were at present before the public for consideration.

That part of the question which interested the Committee on Hygiene most at the present moment was the purity of the Croton water. Dr. Peters had received papers from the Board of Health, mentioning in detail the sources of impurity of the Croton River, arising from the sewage of barn-yards, villages, and factories situated on its banks or its tributaries.

Later he offered resolutions, which were passed, asking the Water Commissioners, and others who were supposed to have power, to institute some method for keeping pure the Croton water.

Dr. Laurence Johnson had made some dredgings which went to show that the deeper lake- and pond-water was, the colder and freer from vegetable matter it was likely to be. This had a bearing on the proposed Quaker Bridge dam, which would hold water of great depth.

CONTAGIOUS EYE-DISEASES.

Dr. JOSEPH A. ANDREWS, the author of the paper, said he did not hope to bring forward anything really new, but he would refer to some views already advanced, support them by additional evidence, and apply them to a number of diversified facts.

The contagious eye-diseases of which he treated were contagious blennorrhœa, especially in the chronic or less acute forms as seen so commonly in our public institutions; and, second, ophthalmia neonatorum, which he regarded as undoubtedly gonorrhœal. He spoke of the ravages of the so-called Egyptian ophthalmia as it had existed in armies, and also of the more chronic forms of contagious ophthalmia, of trachoma, and pointed out the importance of the subject in relation to the protectories and other institutions in this city.

Dr. Andrews had been unable to confirm Sattler's views regarding the bacteria theory of the disease. The ophthalmia of the newly-born he regarded as gonorrhœic, but it was his belief that it seldom occurred during the birth of the child unless labor were protracted; the contagion was introduced usually after birth, during the first washing, or from the mother's fingers which had been in contact with the soiled linen, etc. Dr. Andrews's treatment consisted in the use of a two per-cent. solution of nitrate of silver, and cold-water lotions. He thought it important to have the bill now before the Legislature, relating to contagious eye-diseases in institutions, passed.

Dr. D. B. ST. JOHN ROOSA said that most of the cases of contagious eye-disease in our asylums were of a chronic character; but a large majority of the children recover. The matter was sufficiently serious, however, to require correction. He did not put much faith in the bacteria theory of disease. He did not approve of the use of a solution of nitrate of silver, as the author had recommended: cold lotions were sufficient; even mild astringents, such as alum, might be uncalled for.

Dr. DERBY, Dr. POMEROY, Dr. MITTENDORF, Dr. WEBSTER, Dr. LESZYNSKY, and Dr. WEEKS continued the discussion. Dr. Leszynsky had traced a number of cases of contagious eye-disease in one institution to inmates who had leucorrhœa. Dr. Weeks upheld the so-called gonococcus theory, and explained the benefit obtained from nitrate of silver solutions, cold, etc., on the basis that they destroyed the gonococcus.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held February 10, 1886, the President, JOHN A. WYETH, M.D., in the chair.

ATHEROMA OF THE CORONARY ARTERIES CAUSING PARTIAL OCCLUSION AND ENDOCARDITIS.

Dr. T. MITCHELL PRUDDEN presented a heart illustrating chronic endocarditis with interstitial myocarditis, as a result of partial atheromatous occlusion of the coronary arteries. He presented the specimen because it was a very good illustration of the lesions described, and because also it was a good example of that class of cases in which patients having a serious lesion of an important organ got along very well until some intercurrent disease set in, disturbing the balance, and they then died of the original disease. The intercurrent disease in this case was pneumonia, which had begun to undergo resolution.

Dr. W. M. CARPENTER inquired whether microscopical examination was made of the arterioles of other organs of the body,—for example, of the kidneys.

Dr. PRUDDEN replied in the negative,—that the diagnosis of renal disease was based on the gross appearances.

Dr. CARPENTER said he asked the question because some papers had recently appeared, discussing the relation of general fibroid degeneration of the arterial system and Bright's disease of the kidneys. He had examined the blood-vessels of kidneys removed from the bodies of persons who had given the ordinary history of chronic Bright's disease in a number of cases, and in a certain proportion of them, at least, he had found no particular change in the arteries. It was very true the examination was not made specially with reference to determining this point, yet it was fairly reliable as having been done in the line of instruction in the laboratory of the University. But in other cases in which persons had died of chronic Bright's disease or chronic diffuse nephritis the arteries exhibited very marked changes not only in the external coat, but also in the intima, so that there were at least exceptions to what had been stated as a rule, that fibroid degeneration of the blood-vessels was a part of the morbid anatomy of chronic diffuse nephritis.

Dr. PRUDDEN thought he could concur in Dr. Carpenter's remarks, but in this particular case the lesion in the coronary arteries seemed to be local. There was no general atheroma.

Dr. CARPENTER said that was the reason he asked the question, because this case seemed to be an illustration of the fact that such fibroid degeneration of the arteries might be local, and one point which he wished to make was that it was not a rule of general application that because fibroid degeneration existed in the arteries of one part it must necessarily exist throughout the arterial system in general. The other point was that fibroid degeneration of the arteries, or arterio-capillary fibrosis, was not necessarily a part of the morbid anatomy of Bright's disease.

Dr. PRUDDEN and Dr. WALDSTEIN had made examinations in some cases of death from chronic Bright's disease in which there was absence of general fibroid degeneration of the arteries.

ACUTE PRIMARY SUPPURATIVE NEPHRITIS.

Dr. L. E. HOLT presented specimens removed from the body of a child aged 7 months, which died after an acute illness of three weeks' duration. At first the symptoms were obscure, but later there developed all the symptoms of meningitis, and there also appeared in the urine albumen and a great number of a variety of casts, also some pus and blood. There was a family history of tuberculosis, and the symptoms seemed to point definitely to acute general miliary tuberculosis. At the autopsy, however, he found no tubercles anywhere. There were three ounces of fluid in the cerebral cavities, and marked cerebral congestion. There was moderate broncho-pneumonia. The heart, liver, and kidneys were larger than usual. The kidneys showed marked acute suppurative nephritis, believed to be primary.

Being asked how he collected the urine, Dr. Holt said by putting a clean sponge under the diaper.

Dr. CARPENTER suggested the application of flannel wrung out of hot water over the hypogastric region to induce urination in children.

REVIEWS AND BOOK NOTICES.

A SYSTEM OF PRACTICAL MEDICINE BY AMERICAN AUTHORS. Edited by WILLIAM PEPPER, M.D., LL.D., assisted by LOUIS STARR, M.D. Volume IV. Diseases of the Genito-Urinary and Cutaneous Systems, Medical Ophthalmology and Otology. Philadelphia, Lea Brothers & Co., 1886. Sheep, 8vo, pp. 877.

The first two-thirds of the present volume is occupied by Diseases of the Genito-Urinary System, to which Robert I. Edes, M.D., contributes the initial essay, on "Diseases of the Kidneys, including the Pelvis of the Kidney;" Francis Delafield, M.D., on "Diseases of the Parenchyma of the Kidneys and Perinephritis;" James Tyson, M.D., on "Hæmaturia, and Hæmoglobinuria or Hæmatinuria," and on "Chyluria;" Edward L. Keyes, M.D., on "Diseases of the Male Bladder;" Samuel W. Gross, M.D., on "Seminal Incontinence;" Edward C. Dudley, M.D., on "Displacements of the Uterus;" J. C. Reeves, M.D., on "Disorders of the Uterine Functions, including Amenorrhœa, Dysmenorrhœa, and Menorrhagia;" B. F. Baer, M.D., on "Inflammation of the Pelvic Cellular Tissue and Pelvic Peritoneum;" T. Gaillard Thomas, M.D., on "Pelvic Hæmatocele;" William H. Byford, M.D., on "Fibrous Tumors of the Uterus, Sarcoma of the Uterus, and Carcinoma of the Uterus;" William Goodell, M.D., on "Diseases of the Ovaries and Oviducts;" Alex. J. C. Skene, M.D., on "Diseases of the Urinary Organs in Women;" Edward W. Jenks, M.D., on "Diseases of the Vagina and Vulva;" William W. Jaggard, M.D., on "Disorders of Pregnancy, Functional Disorders connected with the Menopause, Diseases of the Parenchyma of the Uterus, Metritis and Endometritis, including Leucorrhœa;" and George J. Engelmann, M.D., on "Abortion."

A brief section on Diseases of the Muscular System, although not strictly belonging to this volume, has been placed here for convenience. J. C. Wilson, M.D., contributes an article on "Myalgia," James Tyson, M.D., one on "Progressive Muscular Atrophy," and Mary Putnam Jacobi, M.D., one on "Pseudo-Hypertrophic Muscular Paralysis."

The chapter on Diseases of the Skin, occupying one hundred and fifty-four pages, is supplied by Louis A. Duhring, M.D., and Henry W. Stelwagen, M.D.; Medical Ophthalmology is reviewed in seventy pages by William F. Norris, M.D.; and Medical Otology by George Strawbridge, M.D., in thirty-six pages. Like the preceding volumes, this one concludes with a copious index, which would have been more convenient for reference with regard to diseases of the skin if the alphabetical arrangement had been adhered to throughout. The present volume, though less comprehensive than some of the others, is equally direct and practical in its treatment of the special topics considered.

PRACTICAL HUMAN ANATOMY: A Working-Guide for Students of Medicine, and a Ready Reference for Surgeons and Physicians. By FANEUIL D. WEISSE, M.D. Illustrated by Two Hundred and Twenty-two Lettered Plates, containing Three Hundred and Twenty-one Figures. New York, William Wood & Co., 1886. 8vo, cloth, pp. 456.

This work will be warmly welcomed both by the medical practitioner who desires a ready work of reference, and by the student who needs a good dissector. The text is clear and concise, while the letter-press and illus-

trations leave nothing to be desired. The subject is presented in twenty-seven dissections, commencing with the perineum and ending with the brain, of which there are a number of very fine illustrations. The fidelity to nature and the artistic excellence of the cuts, which are all original, are noteworthy. They rival the plates in large anatomical quartos, which are to be looked upon rather as luxuries than necessities by the ordinary doctor. Photo-engraving and printing have been resorted to, with the result of furnishing a set of illustrations far superior to those ordinarily seen in text-books on anatomy. Taken as a whole, this book is one which reflects high credit upon American medicine.

A Manual of Auscultation and Percussion. Embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M.D., LL.D. Fourth Edition, Thoroughly Revised and Enlarged. Illustrated with Fourteen Wood-Cuts. Philadelphia, Lea Brothers & Co., 1885. Cloth, 12mo, pp. 280.

This manual seems to maintain its position in the estimation of the profession. Taking advantage of the exhaustion of the large edition published only two years ago, the author has made some important modifications and considerable additions in the endeavor to make it more useful by a thorough revision. In addition to the wood-cuts of former editions, some diagrammatic illustrations have been introduced which increase the practical value of the work. As the substance of the lessons given by the author to his classes, both to medical students and to practitioners, it is natural that a demand should exist for successive editions of this hand-book, especially when, as here, each is better than the last.

NEW BOOKS.

Seventh Annual Report of the State Board of Health of Illinois. With an Appendix. Springfield, 1885.

The Diagnosis and Treatment of Diseases of the Ear. By Oren D. Pomeroy, M.D. With One Hundred Illustrations. Second Edition, Revised, with Additions. New York, D. Appleton & Co., 1886. 8vo, cloth. Pp. 413.

Local Anæsthesia in General Medicine and Surgery: Being the Practical Application of the Author's Recent Discoveries. By J. Leonard Corning, M.D., etc. New York, D. Appleton & Co. 8vo, cloth. Pp. 103.

The Suprapubic Operation of Opening the Bladder for the Stone and for Tumors. By Sir Henry Thompson, F.R.C.S., etc. London, J. & A. Churchill, 1886. 8vo, cloth. Pp. 57.

Drainage for Health; or, Easy Lessons in Sanitary Science. By Joseph Wilson, M.D. Second Edition, with Important Alterations. Philadelphia, P. Blakiston, Son & Co., 1886. 8vo, cloth. Pp. 74.

The Year-Book of Treatment for 1885. A Clinical Review for Practitioners of Medicine and Surgery. Philadelphia, Lea Brothers & Co. Cloth, 12mo. Pp. 311.

Report of the Commissioner of Education for the Year 1883-84. Washington, D.C., 1885.

Circulars of Information of the Bureau of Education. No. 4. 1885. Education in Japan. Washington, 1885.

NEW REMEDIES AND CLINICAL NOTES.

The Influence of Milk Diet on the Excretion of Albumen in Chronic Nephritis.—In view of the fact that milk diet had been emphatically recommended by many observers (Senator, Sparks and Bruce, etc.), Dr. A. S. Trubatcheff (*Vratch*, No. 46, 1885, p. 763) undertook a series of comparative observations on four patients with chronic nephritis (three with the parenchymatous and one with the interstitial form), each of whom received ordinary hospital diet during one period, and either mixed or pure milk diet during a subsequent period of equal duration. The results were as follows. 1. An exclusive milk diet invariably led to a marked increase in the daily and percentage amount of albumen in the urine. 2. The patient's weight fell considerably, without any marked change in his dropsical state. 3. A mixed milk diet also led, in the majority of the cases, to an increase in the daily and percentage amount of the albumen excreted. 4. Neither pure nor mixed milk diet produced any marked increase in the amount of urine. The author now studies the assimilation of protein by nephritic patients receiving milk diet, which study will enable him to settle the question of "good or harm" of the treatment. —*London Medical Record.*

A New Local Anæsthetic.—The *Medical News* states that Dr. Lewin has found a resinous extract, obtained from the root of Piper methysticum, to be a local anæsthetic of considerable power. The extract is soluble in alcohol, possesses a somewhat aromatic taste, and leaves upon the tongue a sensation of pricking and burning, soon lost in supervening local insensibility. Complete insensibility of the cornea and conjunctiva resulted from the introduction of a very small amount of the extract into the eye of an animal. Hypodermic injections produced local anæsthesia. The constitutional effects of the drug on man are said to resemble those produced by coca. —*Druggists Circular.*

Naphthaline in Dysentery.—In the *Voënno-Sanitarnoë Delo*, No. 46, 1885, p. 514, Dr. Novikoff writes that he has admitted to the lazaretto of the Ninth Grenadier Regiment thirteen cases of more or less severe dysentery, and treated twelve of them by naphthaline in five-grain doses from three to six times daily. All the twelve recovered after several days' treatment. As a rule,

within from twelve to thirty-six hours after the first dose there appeared a striking relief of pain and tenesmus, and then a rapid fall of temperature followed. A thirteenth patient was treated by calomel and ipecacuanha, and died. The single inconvenience of the naphthaline-treatment is the disgusting odor of the drug, which often causes vomiting. To prevent the latter, Dr. Novikoff advises that naphthaline should be administered in isinglass capsules (capsulæ operculatæ).—*London Medical Record.*

Ammonia in Anthrax and Carbuncle.—Dr. Leonidas Avendano regards ammonia as a specific in anthrax and "carbunculous diseases." In cases of malignant pustule he advises that, after an incision has been made, some drops of officinal solution of ammonia be introduced into the wound, with the hope of destroying the bacilli there, and that the ammonia will find its way into the circulation before the bacilli do, converting the blood into a fluid in which the germs cannot multiply. Some ammonium salt, as the acetate, may also be given internally.—*Druggists Circular.*

Arsenious Acid in Hemorrhagic Malarial Fever.—Dr. B. H. Riggs, of Selma, Alabama, reports (*Medical News*, February 27) an interesting case of a white boy suffering with hemorrhagic malarial fever. Calomel followed by salines was given, hot baths, and the following prescription:

℞ Acidi arseniosi, gr. ¼;
Piperinæ, gr. ij;
Pulv. Doveri, gr. x;
Ext. hyoscyami, gr. v. M.

Five capsules.

One capsule taken every three hours until some œdema was observed, when the remedy was given at longer intervals. In thirty-five hours half a grain of arsenic was thus administered. Dr. Riggs noted a prompt improvement, and is disposed to believe that full doses of arsenic constitute the best treatment for this usually fatal disease.

Infusion of Ragweed for Hemorrhage.—Dr. J. H. Hill, of Goldsborough, contributed to the last volume of Transactions of the Medical Society of North Carolina some very interesting notes on the virtues of ragweed (*Ambrosia artemisiæfolia*) in checking hemorrhage. One of the cases he reports was an instance of purpura, in which blood escaped from the nostrils, gums, and kidneys. The patient, a child six years of age, had been bleeding for several days, and the usual remedies had been exhausted, when Dr. Hill resorted to infusion of ragweed, with prompt cessation of the hemorrhage. The family to which the boy belonged bled easily, and two of his father's sisters had died with hemorrhages.

Resorcin for Cancer.—A case of epithelioma is said by Dr. Antoni to have been cured by the application of an ointment, twice a day, consisting of fifteen parts of resorcin to twenty parts of vaseline.

MISCELLANY.

American Medical Association.—The Thirty-seventh Annual Session will be held in St. Louis, Missouri, on Tuesday, Wednesday, Thursday, and Friday, May 4, 5, 6, and 7, commencing on Tuesday at 11 A.M.

SECTIONS.

Practice of Medicine, Materia Medica, and Physiology: Dr. J. T. Whittaker, Cincinnati, Ohio, Chairman; Dr. B. L. Coleman, Lexington, Kentucky, Secretary.

Obstetrics and Diseases of Women and Children: Dr. S. C. Gordon, Portland, Maine, Chairman; Dr. J. F. Y. Paine, Galveston, Texas, Secretary.

Surgery and Anatomy: Dr. Nicholas Senn, Milwaukee, Wisconsin, Chairman; Dr. H. H. Mudd, St. Louis, Missouri, Secretary.

State Medicine: Dr. John H. Rauch, Springfield, Illinois, Chairman; Dr. F. E. Daniel, Austin, Texas, Secretary.

Ophthalmology, Otology, and Laryngology: Dr. Eugene Smith, Detroit. Michigan, Chairman; Dr. J. F. Fulton, St. Paul, Minnesota, Secretary.

Diseases of Children: Dr. W. D. Haggard, Nashville, Tennessee, Chairman; Dr. W. B. Lawrence, Batesville, Arkansas, Secretary.

Oral and Dental Surgery: Dr. John S. Marshall, Chicago, Illinois, Chairman; Dr. A. E. Baldwin, Chicago, Illinois, Secretary.

A member desiring to read a paper before a Section should forward the paper, or its *title* and *length* (not to exceed twenty minutes in reading), to the Chairman of the Committee of Arrangements at least one month before the meeting.—*By-Laws.*

Committee of Arrangements: Dr. Le Grand Atwood, St. Louis, Missouri, Chairman.

The following amendments to by-laws will come up for consideration:

By Dr. Foster Pratt, Michigan: "Each Section shall nominate its Chairman and Secretary,—all other nominations to be made, as now, by the Nominating Committee."

By Dr. I. N. Quimby, New Jersey: "Create a new Section, to be known as the Section on Medical Jurisprudence."

William B. Atkinson, M.D.,
Permanent Secretary.

Artificial Milk.—It is a curious fact that when a fat is boiled with caustic potash in the relation of fifty parts of alkali to one hundred parts of fat, it is gradually dissolved:

the glycerin, however, is not set free. If the alkaline solution is now acidified, the original fat will be regained; but it will have new properties. It is now soluble in alcohol, and when added to ordinary fats, even in very small amounts, it imparts to them the property of forming complete emulsions with extraordinarily dilute solutions of the alkali carbonates. In order to make a liquid which shall possess the appearance and the most important chemical properties of milk, Chichkoff proceeds as follows. Some of the modified fat is added to ordinary fat, and the mixture emulsified with a dilute solution of potassium or sodium carbonate. Calcium and magnesium phosphates are then added in the form of powders, and also a certain amount of casein which has been rubbed up with a little ammonia. Another solution is now made by dissolving milk-sugar in dilute hydrochloric acid and adding a solution of albumen. The two liquids are now cautiously mixed, the acid liquid being poured into the alkaline one, and the mixture well stirred after each addition. This artificial milk does not contain the ferment occurring in natural milk, but if a little sour milk is added to it, a thick layer of cream soon rises which possesses all the properties of real cream and can be worked into butter. The artificial milk also curdles and forms whey. The taste of the milk, however, is not quite as palatable as it might be; but this may be improved by further experimenting. This peculiar power of the modified fat to form emulsions may be of use in pharmacy.—*Druggists Circular.*

Hand-Grenades.—E. Geissler (*Pharm. C. H.*, 1885, 447) has recently been examining some of the numerous hand fire-extinguishers now to be seen in so many prominent places. The Hayward grenade he finds to contain 750 grams of an aqueous solution of 15.7 per cent. of calcium chloride. The Harden grenade contains 555 gram of liquid which consists of an aqueous solution of 19.46 per cent. salt and 8.88 per cent. ammonium chloride. The editor of *Dingler's Journal* states that Fire Superintendent Kayser tested these articles at Essen on August 12, 1885, and reported that they had next to no effect. Schonberg's "Fire-death" contains 440 grams of an aqueous solution of 1.66 per cent. soda and 6.43 per cent. salt. According to the *Iron Age*, Professor Adar, of the University of Geneva, also analyzed an American hand-grenade, and found it to be an aqueous solution of salt and sal-ammoniac. Mr. Tower, of the Agricultural College of Lansing, Michigan, has recently published a number of experiments on the same subject in the *Sanitary News*. There seems to be no evolution of a fire-extinguishing gas from these grenades, and their only efficiency lies in the salt they contain. That strong brine is superior to water in extinguishing a fire is an old story, but that a dozen bottles of it are worth from six to ten dollars is a fresh and exhilarating novelty. How comical it is to think of steamboats, and ocean steamers, which have difficulty to keep the salt water out of them, buying little bottles at fancy prices!—*Druggists Circular.*

Water-Supply of Philadelphia.—At the last meeting of the County Medical Society Dr. Charles Hermon Thomas read a paper on the defects of the present water-supply of the city, and recommended as a temporary expedient that the new sewer, building on the east side of the river, be used as a conduit to bring a purer quality of water to Fairmount basin. A committee was appointed to consider the project, and on the 1st instant Dr. Thomas presented his plan before a meeting of citizens at the Continental Hotel.

The need of the city for better water is urgent, and it is eminently fitting that physicians should constantly agitate the subject until relief is afforded. The plan suggested by Dr. Thomas may be impracticable, but the committee should be continued until a perfectly effective and reliable remedy is adopted to give us an uncontaminated water-supply.

A Tonic Extract of Meat.—A combination of citrate of iron with cinchona, gentian, and other tonics, with extract of beef, constitutes Colden's Liquid Beef Tonic (Ext. Carnis Fld. Comp., Colden's), the composition of which, as given by analysis made by Arthur Hill Hassall, M.D., and the late Erasmus Wilson, M.D., appears upon the label of each bottle. It is both a nutrient and a tonic, and may be used in all diseases characterized by impaired assimilation.

NOTES AND QUERIES.

ERRATA.

In the article "A Case of Difficult Diagnosis," on page 373, first column, fifth line, read "tablespoon" instead of teaspoon, and on page 374, second column, twenty-ninth line, read "trace" instead of excess.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 14, 1886, *TO FEBRUARY* 27, 1886.

None.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM FEBRUARY 14, 1886, *TO FEBRUARY* 27, 1886.

Surgeon J. H. Clark.—Detached from the "Hartford" on the reporting of his relief, Medical-Inspector Bradley.

Medical-Inspector Michael Bradley.—Ordered by steamer of March 10 from New York to Aspinwall, thence to Panama, and to the "Hartford" as the relief of Surgeon J. H. Clark.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MARCH 20, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON LACHRYMAL AFFECTIONS.

Delivered before the Class of the New York Eye and Ear Infirmary,

BY WILLIAM F. MITTENDORF, M.D.

GENTLEMEN,—You will have noticed that within the last few weeks we have had an unusually large number of lachrymal cases to deal with. Lachrymal troubles are much more frequent in regions where there is much catarrhal inflammation of the mucous membrane of the nose. The lining membrane of the lachrymal apparatus being continuous with that of the nose and the eye, inflammatory conditions of either of them are apt to affect also the lachrymal passage.

The first patient whom we had here to-day, a young man enjoying very good health, has had a slight catarrhal affection (post-nasal catarrh) for a long time, which had not given him much trouble, but last year, after exposure, it became a little worse, and he noticed that the eye began to be watery. This continued for one year before he found it necessary or made up his mind to consult us about it. In this case a subacute catarrh extended from the nose to the lachrymal apparatus.

The second patient whom we saw to-day is a young girl, who, as you noticed by the odor, is suffering from ozæna to a slight extent; secondarily, the catarrhal process went up to the lachrymal passage. She tells us that this trouble began about a year ago, but on going to Europe the catarrhal trouble disappeared, and her eye ceased to be watery. Upon her return to this country the catarrhal trouble became more marked, and the lachrymation of the right eye was very disturbing.

This watery condition of the eye has been called epiphora, and depends upon the partial or complete closure of the lachrymal passages. In the cases which we have seen to-day we could trace the disease from the nose to the lachrymal apparatus.

The third patient was an elderly gentleman, who has had a chronic catarrhal affection of the conjunctiva for some time, complaining that his eye has been very watery during the last five or six months. In his case we were not able to squeeze any fluid from the lachrymal sac, but upon careful examination we found that the lower canaliculus had become closed. His epiphora depended, therefore, not upon the nasal part of the lachrymal duct, but upon the palpebral portion of it. The chronic inflammation of the conjunctiva had extended to the canaliculi, and these, being very narrow, had become closed up. It is not always the case, in lachrymal disease depending upon conjunctival affections, that the canaliculi are the seat of the trouble. The inflammation extends much more frequently from the conjunctiva as far down as the sac or the nasal duct. You will always notice that children suffering from phlyctenular conjunctivitis are afflicted with more or less inflammation of the Schneiderian membrane. In these cases the acrid tears passing through the lachrymal apparatus cause inflammation of the Schneiderian membrane of the nose, and it may lead sooner or later to affections or closure of the lachrymal apparatus.

There is one remedy that has of late produced severe inflammations of the lachrymal sac, and that is jequirity. Jequirity has been recommended for the treatment of pannus, and in a great many cases it has been used for granular lids where the cornea was perfectly clear, and where it should not have been used for that very reason. In a number of cases it has produced inflammation of the eye, which extended to the lachrymal apparatus and produced an acute inflammation of the lachrymal sac. I have seen one of these cases, and a number of them have been reported in Europe.

These lachrymal affections may be divided, for convenience, into simple stricture from obstructions of the lachrymal passage, into chronic inflammation of the lachrymal sac, and into acute inflammation of the sac.

Strictures may occur at any portion of the lachrymal duct, but they occur much more frequently at that portion where the mucous membrane is thickest, and where it forms, as it were, a natural valve,—namely, at the junction of the lachrymal sac and the lachrymal duct. If we look upon the lachrymal apparatus, we find that the canaliculi from the upper and from the lower lid open into the sac by one common duct.

This common duct is very short, and for that reason it is very seldom obstructed. But as we go farther down we find that the sac becomes prolonged into the nasal duct, and the mucous membrane lining this portion is very loosely attached, and forms folds which lie almost in apposition with the opposite side of the canal. An inflammatory action in this portion of the canal is apt, therefore, by swelling the mucous membrane, to cause obstruction. If the catarrhal trouble be relieved, this obstruction will disappear again. In almost every severe attack of acute coryza the mucous membrane of this portion of the canal swells, partly closing it, and the eye becomes watery. After the acute attack passes off the tears find their usual channel again. But in more chronic inflammations, the mucous membrane on the opposite sides of the duct being in close apposition for a length of time, adhesions are apt to form, and then we have to deal with a slight stricture, and this is known, as it affects the mucous membrane alone, as a mucous stricture. These have the best prognosis for treatment. They are speedily relieved. But if the process is accompanied with loss of epithelium, and dense cicatrices form which implicate the fibrous portion of the duct, a dense, hard stricture develops which is known as a fibrous stricture. This does not offer so favorable a prognosis.

The third form is the bony stricture. It is sometimes found in scrofulous children, or follows tertiary manifestations of syphilis of this portion of bone or periosteum. You will remember the case you saw here yesterday, in which an elderly man suffered from an affection of this kind. He informed us that a doctor had once opened the cheek and tried to force the probe from this opening through the nasal duct. But he failed, and the man suffered for twenty or more years from lachrymation. Recently this became aggravated by a severe cold, and you will remember that in opening the lachrymal passage we had great difficulty in getting into the nasal duct, or bony portion of the canal, because the opening in this portion was obstructed. These bony strictures require a bold hand. You have sometimes to crush through the obstructing portion of bone, but you must always be careful to let your knife have the proper direction. It is only a short time since I saw a case in which a surgeon, in trying to force his way through an obstructed canal of this kind, lost his way, and the knife passed through the junction of the hard and soft palate. Of course he did not relieve the patient, but caused her a great deal of suffering. In dealing with this kind of strictures we have to be also very careful as we use our lachrymal knife, because the knife is apt to break off and portions of it remain in the canal. If these portions are small you need not be alarmed about it. They become either encapsulated or dissolved by the action of the tear-fluid, pass off, and give the patient no trouble whatever. I have seen this accident occur to the most skilful operators, and if possible it is well not to alarm your patient, but leave it there and not worry about it. Frequently by probing afterwards you will be able to push the portion of steel down through the nasal duct, but even if you do not succeed in doing this there is no harm done.

These are the three different kinds of strictures. Now, we have another inflammation which affects principally the portion above the stricture. This chronic inflammation of the tear-sac has received the name of dacryocystoblennorrhœa, a blennorrhœal inflammation of the lachrymal sac. In a stricture, the tears are not allowed to pass down to the nose; they are retained at the lachrymal sac. In this sac, if they are not pressed out, occasionally they will undergo degenerative changes; they become irritating, and set up an inflammation of the lining membrane of the sac. The increased secretion from the sac, consisting principally of mucus and also of pus, will accumulate and form a distinct tumor by distending the sac. In the beginning the patient may, by pressing upon this very hard, be able either to force the fluid down or upward into the conjunctival sac. But if the disease exists for any length of time it becomes impossible to press the fluid down, and the patient can only empty the sac by squeezing its contents into the conjunctiva. This disease, in itself a disagreeable affection, —because it fills the eyes with tears and putrefied matter,—becomes a source of great danger if an ulcerative process of the cornea is present. I think it was Hartmann who recently discovered three distinct varieties of micrococci in the discharge of this lachrymal sac which are not found in

its natural secretion. These coming in contact with an ulcerative surface of the cornea will poison it constantly, and thus lead not infrequently to complete destruction of the cornea. You are well aware also that this is frequently the source of loss of the eye after cataract-extractions. If the physician neglects, in operating for cataract, to examine the lachrymal passages, he may be surprised, on changing the bandages the first or second day after the operation, to find the eye filled with secretion from this sac, poisoning the wound and starting one of the most terrible affections of the eye,—namely, a purulent infiltration of the operation-wound, which in nearly all cases leads to loss of the eye. If the case be mild, the secretion is principally mucoid in its character, and by pressing upon the sac the thick, viscid mucus is expelled from it. This form is known as mucocele, and may at any time develop into a real blennorrhœa of the sac. It is singular how many months and years people will go on with a trouble of this kind without seeking aid, and it is only when an acute inflammation supervenes that they seek medical advice. A person afflicted with a trouble of this kind catches a slight cold; the mucous membrane of the eye becomes inflamed; the canaliculi are closed up in consequence of it, and we have now the condition entirely changed. The secretion of the lachrymal sac cannot be pressed out; it accumulates; it is so irritating to the cyst-wall itself that it produces inflammation of the sac, and an acute inflammation of the sac, known as dacrocystitis, sets in. Here we have a considerable space of mucous membrane discharging its secretions into the sac, where the discharge cannot escape. The sac becomes very much distended, the surrounding tissues participating; the eyelids become red and œdematous; in fact, the eye becomes closed, and the patient is justly alarmed. He looks upon this—and a great many practitioners will do the same—as an attack of erysipelas. I have seen that mistake made so frequently that I wish to call your attention especially to it. An inflammation of this kind is generally confined to one eye: it never extends over to the other side; whereas erysipelas will spread from one side to the other. Another diagnostic feature is that you have had a watery eye for a number of months or years before the attack came on, a condition which you are not apt to have in erysipelas. You may have the same amount of fever, but the pain in this affection is much greater than that in erysipelas. The forehead may swell slightly, but it has not that characteristic inflammatory appearance which erysipelas has at its margin. The disease, if not interfered with now, is apt to result in the breaking down of the skin overlying this part of the sac. A lachrymal abscess will be the result. The purulent matter discharges through this opening. The inflammation of the canaliculi subsides, and tears begin to pass into the sac from the eye. But the stricture, which has been at the bottom of all this trouble lower down, is still there. Tear-fluid cannot pass; it has to run through the opening in the cheek, and thus prevents its healing: a lachrymal fistula is the result.

We have another form of lachrymal fistulæ, and that is fistula of the lachrymal gland. This, of course, is found at the outer angle of the eye, and is generally in the form of a small, hair-like opening. This affection is extremely rare. A fistula of the lachrymal sac, however, is not rare.

If the trouble is not attended to now, a large slough, by extension of the fistulous opening, may be the result. We saw a young lady, only a few days ago, with such an opening large enough to admit the first joint of the little finger.

Such are the different forms of lachrymal trouble, gentlemen. Now let me say a few words with regard to treatment. No matter what the lachrymal trouble is, in a great majority of cases the stricture of the nasal portion has been the starting-point, and the main part of our treatment must be to relieve the stricture first. No matter whether you have a simple stricture or whether you have a lachrymal abscess or whether you have a fistulous opening to deal with, do away with the stricture, and the after-treatment will be comparatively easy. We all know Bowman's probes. These were invented by Mr. Bowman, of England, to dilate these strictures. Weber invented a number of knives to slit either the canaliculus or to divide a stricture of the lachrymal duct. But it is especially to Stilling, of Strassburg, that we owe the present mode of treatment, free division of the stricture by means of a broader knife, of which I will show you here a few modifications. Of these, we have

here Agnew's knife, with a flexible shank; and here is Dr. Noyes's knife, which is more complicated, and is not so much used as the other one. Here is Weber's curved knife, for slitting up the canaliculus; and here is his straight knife, for dividing the stricture. All these knives have a rounded, oblique-pointed end, which enables you to get into the canaliculus. Sometimes these points are very thick, and you will find it difficult to enter the canaliculus, especially if it is slightly contracted. You will remember the young lady whom we saw here to-day suffering from ozæna, and that in her case the canaliculus was contracted considerably. In order to get into the constricted canaliculus a dilator has been devised by Dr. Peck; but I think a pin will act fully as well as any other instrument that I have ever seen. With this you want to enter the canaliculus, and stretch it a little, when your knife will readily enter it and you can proceed with the operation. There is one point which I wish to emphasize,—namely, in dividing the canaliculus you should be careful that your cut lies in the conjunctival portion of the canaliculus: you should give your knife a direction inward and upward. If you neglect to do this, and make your incision on the free edge of the lid, the tears cannot get into the canaliculus readily, and your operation will not be a success. Besides, it produces more or less of a deformity if the incision be not made within the conjunctival part of it. After getting into the sac, you should raise your knife; but do not push it down until you have passed a little beyond the median or perpendicular line. If you neglect to do this, and begin to push down your knife before you reach this point, you will be apt to come against the nasal bone and cause unnecessary pain. Your direction is downward, outward, and backward, and in order to get the outward direction you must pass your knife beyond the perpendicular line.

After division of the stricture, probes will have to be used in order to keep the stricture open; and it is here that we are indebted to American surgery for the most recent and the most important improvement in the treatment of these affections. It was Dr. Theobald, of Baltimore, who first called attention to the fact that the bony portion of the canal had a much greater diameter than that of the sounds that we were in the habit of using, and he recommended the use of much larger sounds. Formerly we had been in the habit of beginning with No. 1 of Bowman's probes, a very fine probe indeed, and it must necessarily allow the stricture to contract considerably again before the larger probes could be reached. We are now using larger probes immediately after division. I find that in this way mild cases, which had formerly taken perhaps months for complete cure, will be perfectly cured within a week or two. You should pass a large probe, No. 9 or No. 10 of Theobald's perhaps, immediately after the operation, and if possible the next day after the operation; a third time perhaps on the fifth day, and you may have to pass it once more on the eighth or ninth day. That will in the majority of cases leave your patient entirely free from trouble.

Where we have to deal with fibrous strictures, which have a much greater tendency to contract again, and when the bone is denuded of its lining membrane, the trouble is a little more obstinate, and it may be that several weeks or even months will be required in order to cure the trouble.

Fistulous openings, if they exist, will, after passing these large probes, heal of themselves. If larger portions of the integument are gone, it may be well to touch the margins of these ulcerative surfaces with a small piece of caustic, or with the actual cautery, thus stimulating more rapid closure of the ulcer.

Another remedy which we have at our disposal, namely, syringing out the sac with boric acid twenty grains to one ounce of water, or a solution of bichloride of mercury one to two thousand, or a solution of the cyanide of mercury one grain to five or ten thousand parts of water, will benefit the patient very much indeed. The original syringe, as proposed by Anel, consisted of a syringe made of gold or silver; but I find that this is very hard to introduce, and the quantity of fluid which can be used with it is very small. I find that a rubber syringe with a bulb which can be attached to a soft-rubber tubing, which is again connected with a perforated probe, will throw a larger quantity of water through it and allow of more perfect cleaning and washing out of the sac than the old method.

We must not forget that in these cases

chronic inflammation of the eye or inflammation of the Schneiderian membrane of the nose coexists, and that in order to give our patient perfect relief the nose as well as the conjunctiva requires special treatment. I have used in these cases a solution of ten grains of alum, two ounces of camphor-water, and half an ounce of cherry-laurel water for the eye. A few drops of this preparation are to be instilled into the conjunctival sac, and best after the patient has cleaned out the sac by pressing upon it and blowing his nose. He is now directed, after putting in the fluid, to blow the nose, and thus draw the fluid from the eye into the nose, medicating in this way the entire lachrymal canal. After this has been done, a few drops of the liquid are to be taken in the hand and snuffed into the nose, or thrown into the nose by means of a spray. In this way the entire lachrymal duct is treated, and the relief is very prompt and lasting.

In very obstinate cases of stricture, especially of the bony variety, it may become necessary to destroy the sac. This destruction of the sac used to be carried on by opening the sac and burning it with nitric acid. Of course this has to be done under an anæsthetic. I think a much nicer, more effective way to do it is by means of the electro-cautery. But, gentlemen, I hope you will never have occasion to do this. It is not satisfactory ; at least more or less of a scar with a sunken-in appearance in the region of the sac will remain, and I think you ought always to make faithful, persevering efforts to get through the duct.

[The following additional remarks were made in reply to questions by the class.]

With regard to the treatment of small infants suffering with these affections, we must not forget that some children are born with obstruction to the lachrymal canal. In these cases it is apt to occur on both sides. It has been my custom to try ameliorative measures, like cleansing the eye carefully with boric acid, and also syringing the nasal cavity with a concentrated solution of boric acid ; that is, twenty grains to the ounce of water. As soon as the child is a little older, say nine months or a year old, I have gone through the required operation already mentioned. I find that in these children, as a rule, a simple division of the stricture is sufficient. Only in exceptional cases does it become necessary to introduce a probe. Of course you have to use an anæsthetic, and the less frequently you have to resort to these measures the better.

You may have, even in small children, a fistulous opening of the kind mentioned which will call for immediate relief, and the slitting of the stricture and the introduction of sounds should be faithfully attended to. For that purpose you should take a small straight Weber's knife.

The use of styles, which was much in vogue formerly, I have entirely discarded. I have never found it necessary so far to make use of them. I think they are apt to do more harm than good. But I have used a peculiar form of style in patients with chronic affection of the tear-passage who could not remain under my care, immediately after division of the stricture. In these cases I have used a piece of lead wire, passing the lead wire through the divided stricture and cutting it off near the opening in the canaliculus, bending it a little so that it will remain in place. The patient can move it a little if necessary, and it can remain in the eye from one to two weeks. In fact, if no discharge from the eye takes place, showing that the inflammatory condition of the sac is relieved, the patient may take the wire out himself. But I do not like even to use this form of style, for any form of style is apt to slip down into the nasal duct, and by pressing upon the nose cause a great deal of inconvenience. In some cases it has been necessary to cut down upon them in order to remove them. I have also employed in these cases short hard-rubber probes with a broad handle, that prevents their sliding into the sac, but they are more prominent than lead wire.

A bony stricture may take place at any point of the bony canal; it may be the result of a traumatism, and this traumatism may occur at any portion of the canal. But the stricture is most apt to develop at the upper portion. If it take place lower down it may become necessary to chisel through the obstruction; and I have thought of making a drill with a little gimlet, one which can be run with machinery like Dr. Goodwillie's drill for making holes into bones. I had intended to make some such instrument for use in the case of the patient operated upon twenty years ago by an eminent oculist in

this city, who failed to get through the obstruction; but before resorting to such a plan I introduced a sound, and by making some pressure passed through the stricture, and the patient experienced complete relief from his trouble.

ORIGINAL COMMUNICATIONS.

REPORT ON OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
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DISEASE OF THE AURICULAR CARTILAGES.

SCHWABACH (*Deutsche Med. Wochenschrift*, No. 25, 1885), in view of the small number of reported cases (three) of ossification of the auricular cartilage, gives an account of such a case in a man, 59 years old, whom he has had under observation. The ossification, which in this instance dated from youth, comprises the major part of both auricles. The upper and posterior parts of the helix, the scaphoid fossa of the anthelix, with both their crura, and the fossa triangularis, are entirely ossified. The concha proper feels only a little denser than usual, while the tragus and antitragus are free from ossification. Mere inspection does not reveal any change in the auricle, but any bending of the auricle upon itself is impossible.

His second communication concerns a case of spontaneous, non-traumatic perichondritis auriculæ in a woman 28 years old. As in previously-observed cases, which are, however, not numerous, the affection proved very chronic, notwithstanding deep incisions, and in the course of three months terminated with striking contractions and disfigurement of the auricle. It is worthy of note that both the resulting deformity and the protracted course of this disease have been observed to follow when the perichondritis has developed multiple abscesses, while those cases wherein only a single abscess formed, either small or large, were quickly healed without contraction and disfigurement of the auricle.

INFLAMMATION OF THE ATTIC OF THE TYMPANUM.

Dr. Samuel Sexton, at the last meeting of the American Otological Society, July 14, 1885, presented a paper on the above-named, highly important subject. The attic of the tympanum is described as that part of the drum-cavity above the atrium, the larger and lower cavity. The attic is smaller than the atrium, and communicates posteriorly with the antrum mastoideum and the mastoid cells. It communicates also with the under part of the tympanic cavity, or the atrium, "by an elliptical aperture formed internally by the ridge of the facial canal, and externally by the tympanic margin of the auditory plate." The roof of this pyramidal space is the tegmen tympani, the latter separating it from the cranial cavity. Its inner boundary is a convex prominence in the bone produced by the contiguous portions of the external semicircular and facial canals. Its outer boundary is the wide, crescentic tympanic edge of the auditory plate of the squama. In this upper division of the tympanic cavity lie the neck and head of the malleus and the body and short process of the incus. It must be borne in mind, however, that this cavity is not fully defined, especially in its outer boundaries, in early life, for not until the fifth or sixth year have the squama and the tympanic ring so far united as to form the osseous canal, the upper and tympanic edge of which forms the so-called scute, or auditory plate, the outer boundary of the attic.

Inflammations of this part of the tympanic cavity have not received the attention they deserve, because of the hidden and hence often-overlooked position of the attic. Therefore Dr. Sexton has devoted an elaborate paper to the description of the anatomy of this part, and the discussion of its diseases and their treatment. The latter are divided into chronic and acute forms of inflammation,—the former having already been described by others, the latter not so much so. Dr. Sexton devotes most of his paper to a consideration of the acute form. This may originate in catarrh of the head, due to exposure or the exanthemata, or from the entrance of water through the Eustachian tube in bathing or from the nasal douche. Very often only the attic is affected from these causes, because, as it is claimed, the tympanic orifice of the Eustachian tube opening into the attic, as well as the lower part of the tympanic cavity, fluids impelled with great momentum through and up the tube "would follow the upper sweep of the tympanic embrasure rather than gravitate downward." It is also held by the writer of the paper that the presence of irritating fluids is

better borne by the atrium than by the attic. Inflammation of the attic may be consecutive to inflammation of the atrium, but both may be affected simultaneously. Inflammation of the attic alone is more serious than inflammation of the atrium alone, because of the blocking up of the outlets of the former, and the consequent inability of the products of inflammation to escape. More or less pain usually ushers in inflammation of the attic, the membrana flaccida is red, and the upper and inner end of the wall of the auditory canal is also congested. This may also include the upper part of the handle of the malleus.

At this point a retrocession or resolution of the inflammation may ensue, but frequently, Dr. Sexton states, an effusion of serum or blood extends outwardly and elevates the membrana flaccida and the adjacent skin of the external auditory canal. Sometimes this bulging is sufficient to form a sac, which conceals the membrana, and in some cases extends to the outer meatus as a purplish tumor. In some cases drainage continues through a small nipple-like perforation of the membrana flaccida, resembling a polypus, or a true polypus may form at this point. Sometimes periostitis of neighboring parts is an attendant of this disease. Inflammation may also extend downward into the atrium. As long as the membrana and the atrium escape there is not much deafness, though there may be autophonia. Pain is not a true index of the gravity of the disease: it is not apt to be as severe as in periostitis externa. We cannot admit, however, "that purulent matter escaping from the attic through the membrana flaccida, or from a mastoid sinus in cases of ozæna, is characteristic of this disease."

Treatment.—Dr. Sexton relies upon remedies reputed to control inflammatory and purulent action in all cases,—viz., upon minute doses of mercury until purulency threatens, when calx sulphurata is indicated. Pain and vascular excitement may be controlled by aconite, belladonna, pulsatilla, and gelsemium. In certain cases relief may be obtained by removing secretions from the attic, through the Eustachian tube, by a mode of aspiration, as successfully done already by the writer of the paper.* When purulent matter forms after Wilde's incision, drainage can best be maintained by the employment of one or more thicknesses of catgut, which can be folded easily and introduced into the wound, and is not irritating. When a sinus enters the antrum or mastoid cells, this dressing not only permits free drainage, but if the number of folds be increased the opening thereby may be enlarged to almost any desired extent. This seems to aid in the disappearance of minute sequestra. The catgut should be changed as often as once or twice daily. The writer acknowledges his indebtedness for this suggestion for the surgical use of catgut, to Dr. Thomas M. Markoe, of New York.

If as a result of the tympanic inflammation pachymeningitis or cerebral abscess ensue, trephining can be regarded only as a means of drainage, and not as having influence upon the course of the cerebral disease. In the opinion of Dr. Sexton, the surgeon may often avail himself of the tendency manifested by the pent-up products of inflammation to escape through the posterior wall of the auditory canal "by perforating the posterior edge of the thin auditory plate just above where it joins the tympanic plate."

In the local treatment of chronic cases salicylic acid has, in the writer's opinion, "been attended with the best results, bringing about a dry desquamative condition, which is often the best issue hoped for."

* London Lancet, October 18, 1884.

AURAL DISEASES IN DIABETES MELLITUS.

Schwabach, of Berlin (*Deutsche Med. Wochenschrift*, December 24, 1885), after communicating an account of an acute otitis media which he observed in a diabetic patient in 1876, and which resembled the cases of Raynaud and Kirchner recently reported, makes the following interesting concluding remarks on the etiological connection between diabetes mellitus and some sudden and violent forms of aural inflammation:

"It is worthy of note that in all these cases of so-called or supposed diabetic otitis media the attacks are sudden and without any apparent external cause. It is not always possible, in the ordinary form of otitis, to assign a reason for the occurrence of the aural inflammation, especially in those not used to observing processes concerning themselves, and who therefore easily overlook any preceding irritation.

The usually assigned cause is exposure to cold and the occurrence of coryza."

Of the four cases of diabetic otitis alluded to by Schwabach, three at least occurred in individuals already carefully housed and watched in hospitals, where they were for treatment of diabetes. In all of them the otitis occurred without any external inducing cause, very suddenly, and in Schwabach's case the pain came on suddenly, according to the statements of the patient's friends and physician, without any previous exciting cause.

It is also very striking that in all the cases observed, in spite of appropriate treatment, the inflammatory process passed to the mastoid portion with such rapidity and violence that it there produced extensive destruction,—altogether different from the course of inflammation of the middle ear, except when some constitutional disorder underlies it. In Schwabach's case the carious destruction of the mastoid process was extensive, when the short duration of the affection is considered. In his case an advance of the disease was checked by perforation of the cortex of the mastoid. In these cases Raynaud and Ladreit de la Charrière hold that the osteitis mastoidea is the primary disease, and that the tympanic cavity is secondarily affected. The osteitis is referred to the dyscrasia induced by the diabetes, in the course of which inflammation of bones is not unusual. The osteitis, like anthrax and diffuse phlegmon, must be classed among those inflammatory processes with a disposition to necrosis and gangrene which often occur in diabetes mellitus, and which are attributable to the "inflammatory gangrenous diathesis" of Marchal de Calvi.

As a rule, operations on the mastoid, in cases of diabetic otitis media and osteitis mastoidea, are not to be undertaken, except as a very last resort to relieve pain and save life. The prognosis in such operations in these cases is always grave. If undertaken at all in diabetic subjects, they must be performed at the earliest indications, in order to prevent the extensive osseous destruction so likely to ensue rapidly in those suffering from this dyscrasia.

THREE CASES OF SEVERE DISEASE OF THE LABYRINTH FROM SCARLATINOUS DIPHTHERIA.

The account of these cases, as given by Dr. Oscar Wolf, of Frankfort-on-the-Main, presents great interest, because it is uncommon for the aural disease in such cases to be watched from the outset by an experienced aurist.

The first case was one of "severe scarlet fever complicated by diphtheria of the nasal passages and post-nasal pharynx." There was an extension of the diphtheritic process to the middle ear by the Eustachian tubes, and complete loss of hearing.

The patient was a boy 6½ years old. Dr. Wolf was called in consultation on account of pain in the right ear, complained of by the patient on the seventh day of the fever. The diphtheritic membrane had been observed in the nasal passages and the post-nasal pharynx for two days. The cervical glands were greatly swollen, and the nose was discharging offensive purulent fluid. The scarlatinal eruption was then present, confluent on neck and chest, with dark-red petechiæ. Fever high; pulse 116–120; temperature between 40° and 41° C.; great prostration.

The hearing was greatly reduced. On the left side the hearing was still nearly normal, and the membrana showed no abnormal symptom as yet. It was advised to endeavor to check the further progress of the aural disease by a free incision through the right membrana, which was done, with a view to lessening the evil results of entire destruction of this organ by sloughing of the whole, which in such cases is most likely to occur. It appears that Politzer's inflation was not sufficient to force mucus from the tympanic cavity after the incision, and therefore Dr. Wolf employed the catheter with which to force out mucus from the drum-cavity.

Subsequent to the operation on the ear-drum, liquor ferri chloridi was given internally, and "a weak solution was used to syringe out the ear and nasal cavities." A dilute solution of carbolic acid was also used to wash the ear and nose, and boric acid powder was blown into the external auditory canal.

The next day after the operation on the right ear, the left began to show signs of inflammation. The membrana appeared softened and macerated, as the other had done, and the hearing from the outset was so much reduced that a loud voice was not heard close to the ear. The child became very restless, the fever was high, and by morning the temperature was 41.2° C.; pulse 130 and small. Paracentesis of the left membrana was also performed, and air

forced into the tympanic cavity by the catheter, the fluid thus forced from the cavity being thin, serous, and offensive. The parts in the auditory canal were soft, and the mucous membrane of the tympanic cavity was transformed into a spongy, purulent mass.

Three days from the beginning of the ear-disease the patient became entirely deaf, and complained of subjective sounds in the ear. The treatment consisted in instillations of solutions of boric acid, and weak solutions of carbolic acid and of sesquichloride of iron. The ear was inflated by the catheter and the passages cleansed twice daily with disinfectants. Gradually the mucous membrane of the tympanic cavities began to clear up. Granulations were formed, and some of them were scraped off. In the fourth week the discharge from the ears had almost ceased. It was now discovered that the lower half of the right membrana had been destroyed, and three-fourths of the left membrana. The ossicula were *in situ*, but the patient was entirely deaf, and has so remained. After desquamation had ended, in the sixth week, the child was permitted to leave his bed. The gait was unsteady, and with this there was a tendency to fall forward, which persisted for some weeks. But at the end of twelve weeks these symptoms had disappeared, and there was no defect in nose or pharynx. It was concluded by Dr. Wolf and Professor Moos, who had been called in consultation, that the labyrinth had become affected, and that, therefore, pilocarpin injections should be tried; but the father of the patient objected, and the child entered an institution for deaf-mutes.

The second case was also one of severe scarlet fever, with diphtheria of the post-nasal pharynx and extension of the diphtheritic process, *per tubam*, to both tympanic cavities. Recovery of hearing ensued after injections of pilocarpin. The patient was a little boy, 7 years old, of healthy parentage. The temperature ranged between 40° and 41.5° C. for eight days. Eruption confluent at many places and dark red. Diphtheritic membrane on pharynx, and cervical glands swollen.

The child had been attacked on December 20. On January 4, Dr. Wolf saw the case in consultation for the first time. The diphtheritis was then receding, the nares were free, and the child's strength improving. He had been deaf, however, for eight days. There had not been much pain in the ears, but there had been annoying tinnitus. For three days there had been a thin, offensive discharge from the ears.

At this date (January 4), on the right side the lower half of the membrana was seen to have been destroyed. The handle of the malleus was denuded of periosteum and projected into the perforation. The mucous membrane of the tympanic cavity was brownish-red in color, swollen, and covered in places with a yellowish membrane.

The left ear presented similar appearances; but there was not so much destruction of the membrana tympani, and its manubrium mallei was fully covered with periosteum. The watch could be heard from the temple and in contact with the auricle. The tuning-forks C′ and A′ could not be heard either from the mesocranium or from the external meatus. Loud voice could not be heard at all, and the parents of the child communicated with it by writing.

Inflation of the tympana did not improve the hearing. From this fact and the others just narrated, it was concluded that the deafness was due to labyrinth-disease, and it was decided to resort to injections of pilocarpin.

The treatment was begun by injecting 0.005 gramme under the skin of the neck twice daily, increasing the dose by 0.001 gramme every two days until the maximum, 0.01 gramme, was reached. The physiological effect of the pilocarpin was complete, as profuse sweating and copious salivation followed each injection. It was also observed that an increased secretion from the tympanic cavities accompanied the sweating and salivation. In six days sound began to be heard. By the 14th of January,—*i.e.*, ten days from the beginning of the pilocarpin-treatment,—the child complained of aural annoyance at the singing of a canary. On the next day single words were apparently understood by the patient; he began to play, his appetite increased, and his cheeks gained color. From January 20,—*i.e.*, on the sixteenth day of this treatment,—a 0.01-gramme injection of pilocarpin was made every two days only. By this time thirty injections had been made, and the hearing in the right ear was so much improved

that the watch could be heard in contact, and conversation could be understood at two metres. Subjective sounds were now very infrequent and slight; but the hearing in the left ear was very dull.

At the beginning of the treatment vertigo and trembling were intense; but after six injections of pilocarpin these symptoms greatly abated. From January 30 to February 17 nine injections were made; then all injections were discontinued. The child ultimately resumed his school-tasks with children of good hearing, and proceeded without inconvenience, the hearing, however, not being entirely normal.

The third case we find to have been one of scarlatinous diphtheria, with panotitis of both sides, in a little girl 4 years old. She was taken ill December 15, with slight angina; on the second day there was distinct scarlatinal eruption; on the fourth day the temperature rose to 103.3°–104.3° F., and diphtheritic membrane appeared, advancing from the naso-pharynx to the arches of the palate. On the sixth day occurred the first aural symptom,—viz., impairment of hearing. On the seventh day both tympanic cavities were filled with whitish-yellow, partially-organized masses of diphtheritic exudation. The drum-membranes were entirely destroyed. The patient now passed through an attack of albuminuria, with anasarca and great prostration, besides general panotitis with mastoid symptoms on both sides. Upon testing the hearing on February 4, it was decided that considerable disturbance existed in the sound-perceiving apparatus, and it was therefore resolved to resume the use of pilocarpin, which had been tried once, but abandoned on account of the patient's weak condition. Forty-one pilocarpin injections were therefore made between February 8 and May 1. The first twenty-five were of a one-per-cent. solution, the last sixteen of a two-per-cent. solution. The increase in the strength of the solution was rendered necessary because diaphoresis could not be produced by the weaker solution as the strength of the patient increased. By the end of March the body-weight of the child was increased, notwithstanding the diaphoresis. At first the injections were made every day, then every other day, and, finally, twice a week. They were finally entirely abandoned when they regularly produced vomiting, as they did the last six times.

Remarks.—The first of these cases presented the most injurious results, for in little more than forty-eight hours there were total deafness, loss of subjective perception of sound, and alteration of the sound of the patient's own voice. In three months the uncertainty of gait had ceased, but the patient was hopelessly deaf.

In the second case the labyrinth was in the beginning profoundly involved; but an earlier subsidence of the diphtheritic process relieved the labyrinth, one-half of the membrana remained, and the mastoid processes were not involved, as in the third case. The improvement in the hearing accordingly followed sooner and to a more considerable degree, beginning with the reappearance of subjective perception of sounds.

In the third case there was a rapid destruction of the membrana tympani and of periosteum in various places, especially in the chain of ossicles and of both mastoid processes.

The prognosis in such cases as these is always difficult, because the full extent and nature of the lesion cannot be easily determined early in the disease. Dr. Wolf suggests that in the third case there may have occurred a loosening of the stapes-articulation, and therefore ordinary movement in walking might have produced enough oscillation in this bone to evoke vertigo. Finally, the organization of cicatricial tissue would fix the stapes and put an end to its ready movements in walking and the consequent vertigo. The vertigo in such cases, therefore, need not always be referred to labyrinth-lesions.

These cases demonstrate the inability of all the therapeutic means known to us, to check the injurious effects of the diphtheritic exudation even in the first hours of the aural affection. Masses of partially-organized exudation appear in the tympanic cavity, even in the most delicate parts, and if instillations of ten-per-cent. alcoholic solutions of salicylic acid be used, they affect only the superficial parts of the exudation, and not the underlying mucous membrane. Furthermore, in its diseased condition, such applications might erode the membrane of the round window. It is well, therefore, in Wolf's opinion, to limit the local treatment of the ear to cleansing the tympanic cavity with disinfecting and non-corrosive applications. He is of the opinion that pilocarpin acts

by loosening the diphtheritic membrane in the tympanic cavity and by relieving the pressure in the labyrinth. But the tendency to weakness of the heart and somnolence induced by this drug renders it dangerous to the life of the patient if used in the height of the disease. Its use should therefore be resorted to with great caution, and with small doses at first, and only after careful examination of the general condition.

A CONFIRMED CASE OF OPIUM-ADDICTION TREATED SUCCESSFULLY AT THE PATIENT'S HOME; WITH REMARKS UPON ITS TREATMENT, AND ESPECIALLY UPON THE VALUE OF COCA IN OVERCOMING THE OPIUM-HABIT.

BY WILLIAM F. WAUGH, M.D.,

Professor of Practice of Medicine and of Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc.

SOME recent articles in the medical journals, by their extravagant praise of the treatment of the opium-habit in private retreats, seem to question the probability of such cases being cured at their own homes.

Certainly, whenever it is possible, a residence in such a retreat, properly managed, is to be preferred. The advantages are many and obvious.

The very fact that the sufferer has determined to quit all other occupations and devote himself for the time being exclusively to an effort to free himself from his thraldom puts him at once on a vantage-ground. How different is this from his position when he continues his usual vocations, encounters all his daily duties, cares, and worries, and pursues his course of treatment simply as an incidental matter, and not as the sole business of his life! At his home, too, he has this refuge of lies constantly in his mind, that if the trial prove too irksome he may postpone it to some time in the near future, when business is less urgent, the weather is less depressing, or for any other reason he will feel better able to bear the deprivation of his accustomed stimulant. In truth, that one has the resolution to break away from business and home to make one earnest effort at deliverance is in itself a good omen for his success. Pleasant surroundings, change of scene, different cookery, and new acquaintances, all have their influence for good. To this we may add the fear of failure and the consequent disgrace in the eyes of other inmates, which to many persons is a most potent incentive to perseverance.

But, above all else, it is an unspeakable comfort to the miserable, nerve-broken wretch to feel that he has constantly by him a skilful and humane physician, who knows the nature of his sufferings and how best to relieve them, and when to allow him the magic drug when his pangs would be unbearable without it. No man in robust health can readily appreciate what such a trust is to these people. It is like the faith often displayed by consumptives, who "are not afraid to die, since they know that every means available in medical science is being used to prolong their lives and make them comfortable." But the private hospital method is open to two serious objections. Few men in active pursuits can leave their vocations for the requisite time, and fewer can afford to pay the incidental charges.

Great as are the advantages of the hospital method of treatment, it must not be inferred that patients who are unable to avail themselves of its aid are therefore incapable of being cured. In spite of the difficulties, many cases may be successfully treated at their own homes.

I may here state my utter disbelief in any heaven-sent specific, which in some occult manner works the cure by simply giving so many doses in any given time. I do not believe any such remedy has ever been or will ever be discovered. All the cures which have ever come under my observation have been brought about by a system of combined moral and medical treatment based on the general principles of medicine applied to the indications present in each individual case. Let me add here my conviction, which I endeavor most earnestly to inculcate in my teaching, that more true advances will be made in medical practice by exhaustive study of every detail in the management of a case than by groping after specifics. The same method has made in abdominal surgery the most brilliant successes of the modern surgeon.

The patient whose case forms the basis of this paper came to me early in October. He is a very intelligent man, as many opium-habitués are, and gave me great

assistance throughout his treatment by his quick apprehension of the object sought by each remedial measure proposed, and by faithfully obeying all directions given him.

When he first came to me he presented the appearance of great debility. He was very pale; his skin clammy with perspiration, which appeared on the least exertion; his pulse weak, compressible, and irregular. He suffered also with gastric catarrh, constipation, and paresis of the rectum. His forehead was contracted in the manner which is almost pathognomonic of hemicranial neuralgia.

The prognosis in this case was rendered less favorable by the facts that the patient had an invalid wife whose care interfered greatly with his rest at night; his occupation demanded a certain amount of work to be done every day, no matter whether he felt well or not; and, thirdly, he was subject to very severe and frequent attacks of neuralgia. The "anodyne" he used consisted of morphine, chloral, etc., and contained the equivalent of about five grains of morphine in the daily dose.

I give his history in his own words:

I have been a sufferer from neuralgia for upwards of fifteen years, prior to which I was habituated to large doses of quinine, thirty grains daily, on account of chills and fever. I began taking morphine, chloral, etc., nearly five years ago, to ease neuralgic pains when severe at night, and often to aid in accomplishing work that could not be done without such relief. About three years ago I began taking half-ounce doses of anodyne at bedtime, gradually increasing the dose to two half-ounce doses, with a prior dose late in the afternoon of from two to four drachms. This continued during the latter part of last winter and into the summer of this year, when by considerable effort I confined myself to eight drachms in twenty-four hours,—viz., two late in the afternoon, and two three-drachm doses at bedtime, an hour or two apart.

October 13, 1885, I visited Dr. Waugh and stated my case as above, with the additional complaint of constipation of bowels and lack of strength to exert the proper functions of the rectum without the aid of pressure by the hand. Under his advice, from October 13 to 20 I suspended the two-drachm dose in the afternoon, but continued the two three-drachm doses at bedtime, and consumed during this week from one-half to three-fourths of a cake of coca-bola per day. The only unpleasant symptoms of this week were coldness along the spine and neuralgia in right temple and eye, for three days and nights.

[Coca-bola is composed of leaves of Erythroxylon Coca, tea-leaves, coffee (roasted and ground), chocolate, cinchona bark, carbonate of potassium, and a small quantity of gum to make the whole into a mass. It is distinctly stimulating and sustaining to the nervous system.]

From October 20 to 27 I dropped to three drachms of anodyne at bedtime. Up to the 25th I was feeling poorly and having bad rest at night, with coldness in arms, shoulders, and back. Monday and Tuesday much improved. During this week consumed about three-fourths of a cake of coca-bola per day.

October 27. Visited Dr. Waugh; home at twelve midnight; took two drachms of the anodyne and a smoke, but did not sleep; got up at three o'clock and took the third drachm, and slept till six o'clock A.M.

October 28. Fairly well all day; to bed at nine and a half o'clock, and slept till twelve and a half; then took two drachms of the anodyne in hot water, and slept well till morning.

29th. Neuralgia in left of head and temple, began about six P.M., and at eight extended to eyeball; retired at ten o'clock, on two drachms of the anodyne in hot water, and rested well.

30th. Visited Dr. Waugh and had battery applied to temple, and during the day blistered back of neck; slept well, and in excellent condition on 31st.

November 2. Neuralgia began in right temple; visited Dr. Waugh in evening and had battery applied.

November 3. No neuralgia, and no marked inconvenience from lack of anodyne, last night.

November 4 to 10. No anodyne whatever, and the marked results have been restlessness and lack of sleep at nights. In the past week used from four to six chews of coca-bola per day (one-third to one-half a plug).

November 10. Neuralgia severe in right temple; battery was again applied, with but little or no effect. Since the use of the battery on this occasion, I found that it was not in proper working order,—viz., that the carbons and zincs did not touch the liquid, there not being sufficient in the cups. In consequence of the intense pain when lying down, and to get sleep, I arose at one A.M., and took two drachms of the anodyne in hot water; in half an hour after, finding no rest, took two additional drachms, and slept the remainder of night.

November 11. Slight neuralgia in left temple, which passed off before night.

From November 12 to 15 I was feeling very well during daytime, and getting good sleep on alternate nights.

November 16, I complained of dyspeptic feeling after supper and a lack of appetite in mornings to the doctor, who prescribed malt-extract before meals.

On November 22 I again had neuralgia in right temple; applied battery and chloroform-liniment alternately at least a dozen times during the day, with good results; to bed at eleven and a half P.M., and slept well all night.

November 23. Some neuralgia in the morning; applied battery, and before noon nearly all trace of pain had left.

The points to which I desire to draw attention are the following:

1. Morphine was first taken to relieve the pangs of neuralgia; next to produce sleep; and finally "to enable the user to accomplish tasks he would otherwise have been compelled to give up." These three steps illustrate the usual course of the formation of the opium-habit. Many cases of alcohol-addiction originate in the same way.

2. The galvanic battery failed the first time because there was no current developed, the fluid having leaked out of the cells. It never failed to give relief when put in order. The relief was not of long duration, necessitating repeated applications of the current until twelve had been made in one day. The net result was complete relief whenever the current was applied, and shortening of the duration of the paroxysm from four days to twenty-four hours.

This renders it imperative that the patient shall have his own battery, and shall be taught how to use it and to keep it in order. As its action is not attended with noise or sensation, it is well, before each sitting, to test its activity by applying the poles to the temples. If a flash is not seen, the battery needs overhauling. The faradic current is useless in these cases, and the use of the constant current in the intervals, to prevent recurrence of the paroxysms, has in my hands resulted only in disappointment.

In some cases four cells are sufficient, but I find it advantageous to have a battery made to suit each case, after testing them with my office apparatus.

3. Insomnia was in this case relieved admirably by five-grain doses of lupulin. This is a very efficient and safe hypnotic if used in sufficient doses. In chronic mania I have many times administered an ounce and upwards at one dose, repeated nightly for months without any bad effects.

4. Gastric catarrh and constipation were relieved by the following combination:

℞ Ext. rhei fl., f℥ij;
Vin. ipecac., f℥j;
Potass. carbonat., ℥j;
Aquæ, q. s. ad f℥iij. M.

Sig.—A teaspoonful to be taken one-half hour before each meal, in a cup of very hot water.

5. Strychnine was given to prevent the recurrence of the neuralgic paroxysms. The general effect of this remedy is beneficial, though I doubt if Anstie's very favorable opinion of its merits be deserved. My own experience in its use is that, when given for a long time, it rarely fails to alleviate the severity of the disease, but in no case has it effected a cure.

6. The utmost pains were taken to improve the man's nutrition by diet suited to his digestive peculiarities, and by giving malt-extract with pancreatine before meals. Fruit and farinaceous vegetables were given freely, but the amount of nitrogenous food was limited. Moderate exercise was enjoined, stopping short of fatigue. Cold sponging was recommended, with a view of rendering the skin less susceptible to draughts. Neuralgics usually eat too much meat and use too little exercise and cold water. It is only in a small proportion of cases that Anstie's direction to "eat half as much more than when well" is suitable. I have frequently known a paroxysm to be induced by a heavy meal of meat taken by a person of sedentary habits.

7. One point I wish to notice is the administration of drugs in hot water. In this case the evening dose of anodyne was reduced from six drachms to two by giving it in hot water, the patient obtaining the same relief from the smaller dose. It is easy to conceive that the stomach-veins will readily absorb hot solutions, whereas cold ones will remain in the viscus until warm before absorption commences. Thus from the hot solution we obtain the whole effect of the drug at once, as we do in a hypodermic administration. Indeed, the former method might often be substituted for the latter, as the effects of the drug are manifested in almost as short a time.

8. These details of the management of the case having been arranged, what part in the play is left for the coca to enact? Is it not like the fourth officer in the satire on Marlborough, who, when his compan-

ions had taken the hero's sword, shield, and helmet, found that nothing was left of the hero for him to carry?

It is not enough to remove the primary cause of a bad habit, for there is often remaining the habit itself and its effects. Brown-Séquard directed attention to the reflex origin of some cases of epilepsy; but, years before, Esquirol had not only told us this, but had gone further, and shown that, even where the cause had been removed, the fits continued.

So here, the habit having been formed, this habit must be broken up, and the patient's strength sustained until this has been accomplished. For the purpose, therefore, of obviating the depression caused by discontinuing the stimulant, coca finds its field of action. At the time when my patient was accustomed to take his morning dose of anodyne, the distress was completely relieved by chewing coca.

I cannot account for the preference given by some to the hypodermic use of cocaine. I doubt if we are ever justified in teaching a patient the use of the hypodermic syringe. Even for physicians, whose eyes are open to its dangers, it is unwise to use it upon themselves. But it is still a vital point in the administration of a remedy that it should be available at the moment it is needed. This is why I prefer the coca-bola plugs, which are so easily carried, and can be used without attracting notice.

As in the alcohol-habit, so in opium-addiction, the seat of the craving is often in the nerves of the mouth and stomach. The curious qualms complained of are located in the stomach. Hence, by this method of administration, we get the anæsthetic effect of cocaine on these nerves, in addition to the constitutional action of coca.

The chemistry of this drug has been by no means exhausted. It is probable that it has other valuable constituents besides cocaine. Recent investigations, not yet in print, have shown that in several popular wines of coca there is scarcely a trace of cocaine,—too little to be of use: so that whatever virtues these preparations possess are due to other ingredients.

I am continually asked if there be any danger of the formation of a coca-habit. Leaving open for the present the question of whether there would be anything objectionable in such a habit, I can only say that I have never seen it formed. Thirteen years ago I first met coca, in South America. Since then I have used it in hundreds of cases, and have yet to hear of any one becoming addicted to its use. Since the publication of Dr. Bradley's case, I have quietly informed myself as to all the cases within my reach, and find the history quite similar in each. As the morbid appetite for which coca was given died out and the health became restored, the use of coca gradually decreased until it was no longer used. Repeated inquiries elicited the invariable response that no greater difficulty was experienced in discontinuing the use of coca than in quitting coffee or chewing-gum.

The very remarkable cases of cocaine-habit reported from the West are so unlike anything I have ever seen that had they appeared in the secular press I would have concluded they were evolved from the inner consciousness of some hungry reporter. They may serve, however, to emphasize my remarks on the use of the hypodermic syringe.

In conclusion, I desire to quote a few words from the patient whose case forms the basis of this paper. He said to me on his last visit, "Doctor, you told me I must expect a struggle, no matter how I was treated. Now, I cannot say I have had any struggle worthy of the name, nor have I felt the need of any great exertion of will-power. Every unpleasant sensation has been met by a remedy, and at no time have I felt any particular distress." I may add that I had repeatedly examined this patient's urine for morphine, and thereby verified his statements completely.

A CASE OF EXTENSIVE HEAD-INJURY.

BY A. P. FRICK, M.D.,

A. A. Surgeon, U.S.A.

MRS. P., a woman about 18 years of age, was assaulted, late in the evening of March 23, 1884, by her husband, who with an axe inflicted a severe wound on her head. The wound of entrance extended from a point three-fourths of an inch above the external canthus of the left eye posteriorly eight and one-half inches, and penetrated the cranium to the dura mater, which, however, escaped injury. The edge of the axe, after passing some

distance between the dura mater and inner surface of cranium, passed outward, cutting into the bony meatus of the ear, severing the mastoid process of the temporal bone, and making a wound of exit. This wound of exit at its outer side measured, from just behind the lower third of the left ear, postero-superiorly, two and one-half inches. The posterior end of this wound was one and one-half inches from the posterior extremity of the wound of entrance. The point of the axe, after passing out below, inflicted also a slight wound in the integument of the neck, in length a little over one inch antero-posteriorly, about one inch below the wound of exit. The measurement from the external auditory meatus to central part of wound of entrance was four and one-half inches; to its posterior extremity four and one-half inches; and three inches to its anterior extremity.

A fragment of the frontal bone about one inch in length and one-half inch wide was included in the flap of the wound, and there were multiple fractures about the squamous suture of the temporal bone. A large portion of parietal bone was included in the flap.

At the wound of exit the nature and extent of the fractures could not be definitely ascertained; but the edge of the axe severed a portion of the mastoid process of the temporal bone and entered the bony meatus of the ear, where its further progress was arrested. The axe was not very sharp; otherwise it would have completely severed the left side of the head (the ear included) from the body.

The woman was short in stature, fleshy, and in very robust health at the time of receiving the wound. At the moment of assault she was occupying a low seat. The husband, swinging the axe over his head, evidently aimed for the middle of her cranium. The distal angle of the cutting edge, sweeping from the posterior end of the wound of entrance, passed downward and forward, leaving intact the little isthmus of scalp of one and one-half inches from the posterior end of the wound of entrance to the postero-superior end of the wound of exit, and causing the two-and-a-half-inch wound of exit already described, as well as the small wound of the integument of the neck before mentioned.

The outward pressure of the upper or butt end of the axe caused the wide gaping of the wound, the downward sagging of the nearly-severed side of the head, and the free exposure to sight of the dura mater, with its pulsating movements.

It was eighteen hours after the wound was made when I first reached the bedside of the patient. A very luxuriant growth of hair and cloth wrappings were matted into and disguised the extent of the wound. My first steps, after injecting eight minims of Magendie's solution of morphine hypodermically, were to soften the mass with a carbolized solution and to remove the cloths, hair, and other foreign matter, including clotted blood, from the wound and its surroundings. No bleeding points were found that could not be arrested by torsion.

After thoroughly and carefully cleaning the wound, and replacing the parts as nearly as possible in their natural position, I closed the wounds with the interrupted suture. About one inch of the wound of exit behind the ear was left open for drainage.

There were no cerebral symptoms, and the woman was able to converse freely about the assault by her husband. Lint saturated with a two-per-cent. solution of carbolic acid was now placed upon the parts and ordered to be kept constantly saturated. General hygienic directions were given, and restricted diet, a saline laxative, and hot foot-baths at night were ordered.

On the third day after receiving the injury the condition of the patient was found quite as favorable as could possibly be expected; temperature, 99°; pulse 100. Carbolized lotion continued, and such general care as to diet and hygiene as was possible in the hovel which constituted her dwelling-place was ordered, and opiates were left, to be used as directed.

On the fifth day the patient was found better than had been looked for; temperature 99⅘°; pulse 120; the discharges were becoming profuse and fetid; same treatment continued.

On the seventh day she was doing well; discharges less fetid, temperature nearly normal, and pulse 90. A drainage-tube was now introduced into the wound of exit behind the ear a distance of about three inches; three grains of quinine at a dose were ordered to be taken three times daily, and an irrigating apparatus was constructed. Instead of the carbolized lotion, a solution of bichloride of mercury

(fifteen grains to the quart of water) was substituted, which proved most efficient and satisfactory as an antiseptic. All parts of the wound were kept thoroughly drained through the drainage-tube already referred to. The visits were continued every other day, and the same general treatment continued for seven weeks.

At no time throughout the treatment were there any brain-symptoms indicating pressure or irritation, and never any greater elevation of temperature than 101$\frac{2}{5}$°. Great difficulty was experienced in keeping the parts properly in place, as the original sutures failed to hold, constantly tearing through the tissues of the scalp. At first the sutures were renewed, but with unsatisfactory result. A large portion of the head was then smoothly shaved, and the parts held in place by carefully-adjusted compresses and adhesive strips, radiating in a fan-shaped manner from a point just below and in front of the left ear.

During the first week in June, 1884, a little less than two and one-half months after the injury was sustained, this patient was able to attend as a witness in the trial of her husband at Prescott, Arizona. The drainage-tube, which then entered less than half an inch, was permanently removed, and I finally discharged the patient, cure completed, on June 11, 1884.

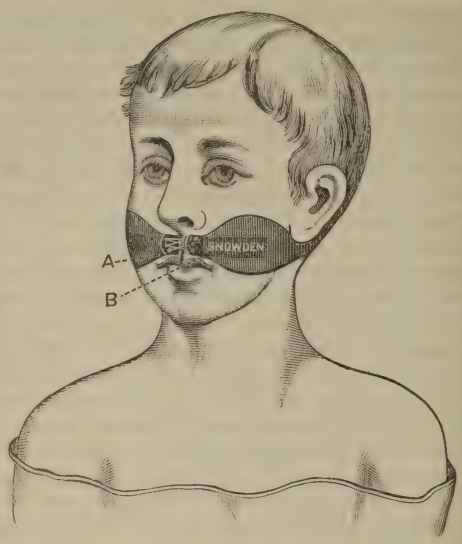
FORT THOMAS, ARIZONA, February 4, 1886.

METALLIC STRIPS WITH ADHESIVE PLASTER FOR HARE-LIP DRESSING.

BY J. NEELY RHOADS, M.D.,

Resident Physician, Jefferson Medical College Hospital.

THE following device, which Mr. Snowden has made under my direction, has been found useful at the surgical clinic of the Jefferson Medical College in the treatment of cases of hare-lip, to avoid tension upon the wound. The little apparatus is shown after its application in the illustration, and it is made as follows. Have your instrument-maker prepare two pieces of metal about two and a half inches long, three-fourths of an inch broad, and about as thick as heavy tin or thin sheet-iron, and one-eighth of an inch distant from one end of each let him make three one-eighth-inch holes, then have them both bent so that when applied to the face the short



ends stand out from the face parallel to each other, the line of the bend to be three-fourths of an inch from the holes represented by A B in the diagram. The metal should be steel, with the temper taken out of about an inch of the ends opposite the holes, and these ends should also be ground very thin, so as to be pliable and to prevent any possible *compression*. They should also be perforated with several holes, so that the plasters would adhere more firmly, and so as to allow them to be sewed fast to the plasters if necessary. Then cut four pieces of adhesive plaster (preferably belladonna, as it has crinoline upon it) six inches long and two inches broad: take one of these pieces, lay it crinoline side down, draw a line through the middle lengthwise, and moisten its non-sticking surface with mucilage or some other adhesive material; then line one of the metals in the middle lengthwise and lay it upon the back of the plaster, line upon line, and so that the edge of the plaster conforms to the angle of the metal, as shown by the cut; then take another plaster, remove the crinoline, and place it with its adhesive surface upon the metal and other plaster, exactly covering the latter. Take the two remaining plasters and other metal and prepare in same manner. Now, with the scissors trim the plasters to conform to the face, letting them taper towards the back of the head, then sew a buckle on the tapered end of one of these so that they can be buckled together. After the operation,

remove the crinoline from the metallic ends of the plasters far enough back to allow the plasters to adhere to the face, allowing it to remain on the back of the head, to prevent the plasters from sticking to the hair.

Then apply them to the face so that the metal end of each will be three-quarters of an inch from the wound, and so that the angles A B will be about one and a half inches apart; fasten the other ends at the back of the head loosely, so that the integument can be drawn forward; then pass a small cord through the holes in the metals and draw them together, so as to remove the tension from the wound.

By this contrivance crying babies are prevented from tearing out the stitches, as all such force is confined to the cords; consequently the operation can be done with fewer stitches, giving the parts a still greater chance for free circulation; and, the cords being three-quarters of an inch in front of the wound, it can be dressed without interfering with them, so that the plasters can remain on till the wound is entirely healed. I think that a similar contrivance would also answer for adjusting wounds in other parts, especially in strumous persons, where it would be wise to avoid all unnecessary inflammation. Such wounds, I think, could be made to heal without the use of a stitch in the flesh.

Of course the plasters for the hare-lip wound need not be just the size or shape represented above, as they may be made large enough to cover the entire cheek.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF J. M. DA COSTA, M.D.

CLINICAL REMARKS ON A CASE OF HEART-DISEASE WITH PHTHISIS—BACILLI FOUND IN SPUTUM—FREQUENT HEMORRHAGES.

GENTLEMEN,—The case of M. B. presents a rare clinical combination. He occupied bed 27 in the Men's Medical Ward, and is a laboring-man of good habits. Fifteen years ago he had an attack of rheumatism which kept him in bed for three months. After this he felt well, except an occasional rheumatic pain, until December, 1884, when he began to suffer with giddiness, headache, with black spots and flashes of light before his eyes. About the same time he caught cold and had much cough and expectoration, beginning rather suddenly, which he is not yet free from. There was no person living with him in the same house who had a cough that he knows of; he is certain that this cough began suddenly and was due to exposure to cold. In January, 1885, he had a hemorrhage from his lungs which was rather free, since he states that he lost about a quart of blood. During the winter he grew worse; the hemorrhages became more frequent,—he had two or three a week at one time,—but his appetite has continued good, and he thinks that he lost very little in bodily weight.

He was admitted one month ago with marked lung-disease, and since then has had six hemorrhages, attended with rise in temperature. Between the attacks his temperature was 99°; during these periods it was 101°. For about ten days before each hemorrhage he had observed that he suffered from chills at night, often followed by heavy sweats; he occasionally sweats at other times. He has some irritative fever and sweats after each hemorrhage for a few days; then he has another chill and sweats, followed by another hemorrhage. The expectoration is mucous, and is not profuse, except during the hemorrhages; it decreases for a few days after the bleeding, and then gradually increases until the next one takes place. Evidently the hemorrhage is a relief to him, as he always has less pain and cough after it.

There is a point of interest in connection with the prognosis which remains to be mentioned. He has tubercle-bacilli in his expectoration: they have been detected at each examination.

His present condition is fair: his appetite is good, bowels regular; there is a slight rise in temperature at night, and he has no sweats except just before the hemorrhage. His urine is acid, specific gravity 1023, and contains neither albumen nor sugar; the phosphates are in excess, especially before a hemorrhage. His temperature has been irregular,—101° just before the attacks, and almost normal between them. He is not losing weight. His face is pale, tongue coated, body not emaciated, nails curved moderately, and finger-ends slightly clubbed. He expectorates about a pint of frothy mucus in twenty-four hours. Upon listening to his heart I find unmistakable evidence of aortic regurgitation, a distinctly-marked long

murmur taking the place of the second sound, most evident at midsternum, and slightly to the right; it is also heard faintly transmitted to the apex. The first sound is rather dull, but there is no distinct murmur. There is a moderate amount of cardiac hypertrophy with dilatation.

Now we will see the physical conditions that pertain to the lungs. There is marked dulness on percussion existing over the whole of the upper part of the right lung anteriorly, and the same is observed posteriorly. When I place the stethoscope under the right clavicle, I find crackling and cavernous respiration, and the murmur from the heart is extremely well heard over this portion of the lung. There is whispering pectoriloquy also heard over the spot indicated. Coarse crackling is found at the lower part of the right lung anteriorly. Harsh, almost bronchial, breathing exists at the upper part of the same lung posteriorly. Percussion-resonance is good over the left side of the chest; exaggerated respiration, but still vesicular, is heard over the apex of the left lung, with slightly-prolonged expiration. Posteriorly, vesicular breathing is heard, slightly exaggerated here and there over the left side. Upon a held, full inspiration, more marked dulness than before is developed at the right apex, and just under the left clavicle the percussion-note is not quite so clear as it is below. There is no impairment of special senses, and no swelling of his feet.

Now, gentlemen, here you have before you a curious case. In the first place, as regards the diagnosis, it is very evident what is the matter with the man. He has aortic regurgitation, and he has a cavity at the apex of his right lung: the right lung, indeed, is pretty generally involved. The left lung is just beginning to be affected; there is beginning consolidation just under the left clavicle. It is also very evident, if the microscope be of any use in diagnosis, that the breaking down of the lung is tubercular. We have here, then, a combination of tubercular disease with aortic regurgitation; no aortic narrowing, or certainly not to any extent.

Now, you will ask, Is this combination a frequent one? Do you often find cases of consumption with so marked a lesion of the heart? No; it is very rare. Even so great an authority as Rokitansky says that, as a rule, if you have disease of the heart you will not have consumption; and, if consumption, no disease of the heart. This case shows the fallacy of the rule. But in children with defective circulation due to aortic narrowing, I think that one authority—Lebert—lays this state down among the causes of consumption. In other words, where the circulation through the lungs is defective in childhood, owing to this stenosis of the aortic orifice, the subject is liable to consumption in after-life.

Now comes another very interesting question for consideration. Was this primarily a case of consumption, or was it originally, as he has said, due to a cold, and did the consumption afterwards become engrafted upon it? This is one of the most important of the questions of modern medicine engaging the attention of clinical observers and pathologists at the present time. But you ask, Can a consumption begin with inflammation, or can a pneumonia end in consumption? I think that this case will support me in the view that there are a certain number of cases in which, beginning as ordinary inflammation, the consumptive process becomes afterwards engrafted upon them. How it becomes developed—whether the bacilli find in the diseased lung a suitable nidus for their growth, or whether they are capable of originating the process—we cannot now decide. The fact is that here is a man with heart-disease who should not have consumption, but at the same time he presents a condition of the lungs generally recognized as distinctive of phthisis,—consolidation, a cavity, and bacilli in the sputa.

I think that the only solution possible is that the pulmonary lesion began as an inflammatory process due to a cold, and that the bacilli subsequently found here a suitable nidus for their development.

Coming now to the peculiar feature in the clinical history of the case, we observe that the hemorrhages diminished his pains and seemed to do him good: they relieved the congestion of the lung. Even in cases of consumption where there is no disease of the heart you will often find that some hemorrhages occasionally will relieve the congestion. In these cases the patient is usually uncomfortable for several days, the symptoms are worse, until finally the bleeding occurs and he is better. The indication then would be not to interfere

too actively with the hæmoptysis, but to let nature take its course.

He has been taking half a drachm of the syrup of the iodide of iron three times daily, and a tablespoonful of cod-liver oil after each meal. To this may be added veratrum viride, to prevent the tendency to congestion of the lung. He shall have five minims of the fluid extract once or twice daily. He sleeps in a well-ventilated room, has abundance of nourishing food, and shall take exercise in the open air when the weather will permit.

TRANSLATIONS.

Vicarious Hemorrhage from the Ears, with Temporary Deafness.—Stepanow, in the *Monatsschrift für Ohrenheilkunde*, No. 11, 1885, reports a case of a young girl, 17 years of age, suffering with dysmenorrhœa, who had much general disturbance at the menstrual period, and bleeding from the left ear. She had had nervous manifestations accompanying her menses from the thirteenth year of her age; later, in place of menstruation, bleeding occurred from the ears, at first from both, later from the left ear alone. Previous to the hemorrhage the patient complained of steady pain, vertigo, and general weakness, accompanied by deafness. The tuning-fork applied to the skull revealed a diminution in hearing corresponding with that shown by inability to hear whispers or the ticking of a watch. Objective examination showed no changes whatever in the ear, not even hyperæmia; during the examination no blood was detected, although shortly afterwards the canal was found filled with blood. The reporter believed that there was no possibility of simulation.

The report further observes that there can be no doubt (1) that the blood issued from the walls of the auditory canal, while the parts were entirely intact; and (2) that it came from the portion external to the drum-head, and not from the middle ear. When the bleeding stopped, the hearing rapidly improved, and in a few days became normal. The anæsthesia of the auditory canal Stepanow attributes to a direct effect of the trophic and vaso-motor disturbances in the region of the labyrinth, and not to an hysterical cause. With regard to the manner of the bleeding, the author holds as the most plausible explanation that "it occurs by diapedesis; and that, perhaps, by analogy with the so-called stigmata of hysterical subjects, the sebaceous glands of the auditory canal play no small part in its causation."

Etiology of Purpura Hæmorrhagica Febrilis.—In the *Archiv für Experiment. Pathologie*, etc. (vol. xix.), Dr. Reber reports a rapidly fatal case of gangrenous tonsillitis, complicated with purpura hæmorrhagica, in which he was able to detect in the blood and tissues numerous micrococci in chains. This organism was then cultivated on gelatin for six months, when the organism was found to have died out. The few cocci found were smaller than the micrococcus of osteomyelitis. The occurrence of the hemorrhages was attributed to blocking up of the smaller vessels by emboli formed of micrococci; although this hypothesis was not confirmed by observation.—*Centralblatt für die Medicinischen Wissenschaften*, No. 8. [The propriety of considering this a case of purpura hæmorrhagica seems questionable.—Ed.]

Total Extirpation of the Carcinomatous Uterus.—In the statistics recently contributed by Schultz to the *Deutsche Medizinal Zeitung* regarding the mortality in cases of malignant disease of the uterus, an error crept in owing to the accidental omission of the forty-sixth year from the calculation. The number of deaths from all causes among women from the forty-sixth to the fiftieth year inclusive is 6.66 per cent. of those living, and of these deaths 6.62 per cent. die of cancer of the uterus,—*i.e.*, 0.3641 per cent., and not sixty-six per thousand, as Schröder's book states, nor thirty-six per ten thousand, as the author recently stated, but forty-four per ten thousand (from the forty-sixth to the fiftieth year inclusive). Schröder's statement, therefore, is not eighteen, but fifteen, times too high.—*Deutsche Med. Zeit.*, February 22. [See page 348, *ante*.—Ed.]

Benzoate of Cocaine.—According to Dr. Bignon, the benzoate is the best of the salts of cocaine for producing local anæsthesia. It may be extemporaneously made by combining one part of benzoic acid with three parts of cocaine.—*Nouveaux Remèdes.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MARCH 20, 1886.

EDITORIAL.

PROFESSOR AUSTIN FLINT.

IT may truly be said that the sudden death of Professor Flint has been more widely felt and has caused a deeper sense of affliction than would the loss of any other member of the medical profession at the present time. This is due not only to his eminent services to American medicine and his brilliant career as author and teacher, which he continued with undiminished activity to the latest moments of his life, but especially to the pre-eminent position which he occupied and the influence which he was enabled to exert in behalf of the best interests of the profession. He had a world-wide reputation as a distinguished author, as a successful teacher, and as a defender of the Code of Ethics; but his highest honor was that by the unanimous choice of both the old and the new executive committee he was declared to be the American physician most worthy to preside over the deliberations of the International Medical Congress, and it was confidently believed that, by the force of his character, and the influence which he possessed among members of the American Medical Association, he would be enabled to heal all dissensions and securely establish the success of the Congress of 1887. This hope is rudely dissipated by the immutable decree of death; but the affairs of the Congress, having had the benefit of his guiding hand thus far, it is hoped will proceed without serious interruption to a successful conclusion.

Professor Flint, like his friend Professor S. D. Gross, died surrounded by friends and full of years and honors. It was his privilege to contribute in no small part towards the elevation of American medicine to the high position which it now occupies in the estimation of the profession of Europe.

"*Non hoc supremum munus amicorum est, prosequi defunctum ignavi fletu, sed, quæ voluerit, meminisse; quæ mandaverit exsequi.*"

CHANGES IN THE BLOOD FROM MALARIAL POISONING.

IN a communication read before the last International Medical Congress at Copenhagen, Professor Tommasi-Crudeli narrated the results of observations, made in Rome, relating to certain specific alterations occurring in the red blood-corpuscles in consequence of malarial infection. The researches which he had inaugurated were continued last year by Marchiafava and Celli, whose results throw some light upon the origin of the black pigment in the blood of malarial cachectics, but leave the question of the nature of the infecting agent still unsettled. These later investigations have been communicated by Professor Tommasi-Crudeli to the *Indian Medical Gazette*,* the paper being accompanied by illustrations representing the alterations taking place in the red blood-corpuscle during the malarial infection. These observations proved that the source of the melanin found in the blood and tissues of chronic malarial subjects is a destructive change occurring in the hæmoglobin, which takes place in the interior of the red blood-corpuscles, the degeneration spreading uniformly and progressively through the globular protoplasm. At first some very small black granules are seen, apparently in the interior of the cell, which gradually increase as the degeneration advances. Coincidently with this increase in the number of black granules, there is a disappearance of protoplasm in parts of the globules and the substitution of a colorless material. This

* Calcutta, January, 1886.

substitution occurs irregularly, and may commence either at the centre or at the periphery: in the latter case the colorless hyaline material often assumes a crescentic form. In the final stage the red blood-globules are found converted into hyaline spherules containing a great number of black granules, which, for the greater part of the time, exhibit well-marked oscillatory movements. On the disintegration of these spherules, the melanotic granules are set free, and are to be found slowly swimming around in the blood-plasma or collected in clusters in the white blood-corpuscles, or, as is frequently the case, adherent to entire red globules.

It was these hyaline and pigmentary bodies which by Laveran and by Richard were mistaken for a parasitic organism, and the slender filaments among the detritus of the red blood-corpuscle were described by Laveran as the completely mature parasite; but Marchiafava and Cuboni found the same pseudo-bacillary forms in the blood of patients suffering with pernicious fever. Tommasi-Crudeli states that these appearances are products of disintegration of the red blood-corpuscles, and can be obtained at pleasure by heating normal blood to 104° F., and that they are also nearly always found in the blood in febrile states. They are to be distinguished from bacillary forms found by Crudeli in the blood of malarial subjects.

In the very interesting paper from which we have quoted, the progressive changes of the blood-corpuscle are depicted, and the value of their appearances in diagnosis is insisted upon. Whether the granules are the germs of a schizomycete or are of a different nature, and whether the hyaline change is due to a parasitic amœba or is simply a retrograde form of protoplasm, are questions which cannot be definitely determined at present. But the fact has been determined that the changes above detailed took place in every malarial case the blood of which had been examined.

It is believed that this may render great service in the diagnosis of anæmia, neuralgia, and other cases, such as pernicious fever and purpura hæmorrhagica, where the prompt detection of the true nature of the malady may become of vital importance.

HEADACHES ASSOCIATED WITH CHRONIC NASAL CATARRH.

THE reflex headaches due to eye-strain, and to disorders of the pelvic organs, are now generally recognized by the profession and receive appropriate treatment. It is only comparatively recently, however, that attention has been directed to headaches associated with catarrh and other morbid conditions of the naso-pharynx. A discussion following a paper on the "Reflex Symptoms in Nasal Affections," read by Dr. Gruening before the New York Academy of Medicine, has already appeared in the *Times*.*

The relationship existing between pathological conditions of the upper air-passages and migraine and other neuroses was emphasized in this discussion, and the examination and appropriate local treatment of recognizable nasal disease were plainly shown to be essential features of the rational treatment of such cases.

More recently Dr. Harrison Allen, of this city, has read a paper before the Philadelphia Neurological Society on the "Headaches which are associated clinically with Chronic Nasal Catarrh," in which identical views are expressed, although independently reached, since the paper was prepared before the earlier discussion was published. Dr. Allen describes three principal forms of headache occurring in the course of chronic catarrh,—the reflex, the neurotic, and the inflammatory. The distinction between the first two forms does not appear quite clear, but the diagnosis between them and the hemicrania of gastric origin and other forms of

* Philadelphia Medical Times, February 6, 1886, p. 364.

headache is easy. The headaches of inflammatory origin are due to extension of the disease. The author cites only the invasion of the frontal sinus by congestion or inflammation as examples occurring in his own experience. It should not be overlooked, in cases of headache due to nasal disease, as stated by Beverley Robinson in the discussion previously referred to, that there exists in the subject a special neurotic susceptibility or predisposition which requires consideration as well as the local condition. All cases of chronic nasal catarrh do not suffer with headache.

TO THE EXECUTIVE COMMITTEE OF THE INTERNATIONAL MEDICAL CONGRESS.

THE death of the late Professor Austin Flint has rendered it necessary to have another standard-bearer around whom all may unite in securing and advancing the best interests of the International Medical Congress of 1887. We respectfully suggest that there is one who we believe, if nominated, will make the Congress an undoubted success, and who, moreover, is pre-eminently qualified for the position. Without his knowledge, concurrence, or consent, we take the liberty of naming, as most worthy to succeed to the vacancy, J. M. Da Costa, M.D., LL.D., Professor of Practice of Medicine and of Clinical Medicine in the Jefferson Medical College, ex-President of the Philadelphia College of Physicians, a distinguished member of the American Medical Association and of various Foreign Societies, and one whose reputation as an author, teacher, and physician is world-wide.

It is evident that a physician should be selected, since in 1876 the choice fell by unanimous consent upon a surgeon; and we believe that the distinguished member of the profession who was the unanimous choice of the original Executive Committee as Chairman of the Section of Practical Medicine should now be nominated for the presidency of the Congress.

ORGANIZATION OF THE INTERNATIONAL MEDICAL CONGRESS.

FROM the Chairman of the Executive Committee we learn that the organization of the International Medical Congress is nearly complete. More than three hundred of the representative physicians in all parts of the country have now signified their acceptance of nominations in the several Sections, and declared their willingness to do all in their power to make the Congress successful. We are glad to hear that the Secretary-General, Dr. Davis, is regaining his health, and has not abated his enthusiasm for his task. He expects to be able to present a very favorable report to the St. Louis meeting of the American Medical Association.

NOTES FROM SPECIAL CORRESPONDENTS.

CHICAGO.

EARLY in the winter an effort was made to establish a polyclinic, and two or three medical men gave a good deal of attention and time in this direction. The plan upon which they worked was to induce some of the more prominent members of the profession to accept stock and a professorship. Most of those approached took kindly to the professorship, but failed to display any great keenness of appetite for the stock.

The stock was intended for the purpose of establishing a hospital for the sole use and purposes of the polyclinic. The gentlemen having the matter in care met with so much sympathy and so little substantial aid that they quietly pigeon-holed the whole business.

En passant: the practitioner's course at the schools in this city has not proved a brilliant success. Some have succumbed to old age (?); others are growing weak and demand that careful attention so necessary to the support of failing powers. Now comes the new idea,—viz., "mutual protection against blackmail."

One of our younger collaborators has undertaken the organization of a protective society against blackmailers. This gentleman has read a paper, issued circulars, etc., to members of the profession, elicited an expression of opinion in writing from half a dozen or so, and now awaits results. The necessity for the existence of such a protective association is questionable. Its organization assumes that all prosecutions for mal-

practice are blackmail; that the profession are so open to constant attacks of this character that a banding together is necessary for protection. Of course this is unsound, as we all know that there are many cases for malpractice when the plaintiff has a good cause in equity. The formation of a society for mutual defence against blackmail would certainly not elevate the profession in public esteem. As well might the general public organize such a society, for I believe the medical profession are not any more subject to such attacks than are those in the various walks of life. When a genuine case of blackmail presents, why not have the local medical society lend its moral and material support, just as the New York County Medical Society has done in the case of the Drs. Purdy? Would not this latter form of aid be less likely to prejudice such juries as we now have? There may be some excuse for additions to our already numerous societies, but there can hardly be one for the existence of a "Physicians' Protective Association."

Our medical colleges have, with a single exception, had three commencement exercises for the year, and all appear enthusiastic over the increase of business. Rush College came first, graduating a class of one hundred and sixty-one, the diplomas being presented with great ceremony at Central Music Hall on the afternoon of February 16. The usual banquet was given at the Palmer House, four hundred persons being at table. The graduating exercises of the Chicago College of Physicians and Surgeons were held at the Grand Opera-House February 24; diplomas were presented to eighty-two candidates. A banquet was given by the faculty at the Sherman House, one hundred and fifty being present.

The exercises attending the tenth commencement of the Chicago Homœopathic Medical College took place at the Chicago Opera-House February 24; the graduates numbered fifty-two. Hahnemann Medical College graduated one hundred and fifteen, and on the same evening entertained two hundred and fifty at a banquet. It is generally conceded that the homœopaths had the best band in the line, and it is evident that they have nothing to complain of from a business point of view. Though some of the regular schools are advertising through the daily press, they lack the business tact of the homœopaths.

One of our most prominent professors was interviewed a day or two ago by a newspaper man on the question as to "Where do the students come from, and where do the doctors go?" I quote the last answer given as being a fair sample: "But there is no danger of the profession becoming overcrowded. The young doctors now going out are going to the new towns and to take the place of the old doctors, and those who become disqualified from year to year through the passage of State laws regulating practice. Then we have fifty million people, and the medical colleges will do well if they keep pace with the growth of population, without the fear of equipping too many doctors."

In view of such an opinion, coming from a prominent teacher, it may interest your readers to know that we have in this city about one physician to every three hundred and sixty-five of population, and yet this city is growing more rapidly than any other centre. The health of the city during the winter has been fully up to the standard of past years.

CHICAGO, February 27, 1886.

PROCEEDINGS OF SOCIETIES.

PHILADELPHIA ACADEMY OF SURGERY.

A STATED meeting of the Philadelphia Academy of Surgery was held March 1, 1886, the President, Dr. D. Hayes Agnew, in the chair.

Dr. Samuel Ashhurst read a memoir of Professor S. D. Gross, founder and first President of the Academy.

Dr. Charles B. Nancrede read the following report of an

EXTENSIVE GUNSHOT-FRACTURE OF THE CRANIUM WHERE RECOVERY TOOK PLACE.

Ellen McM., æt. 17 years, was admitted October 20, 1885, into the female surgical ward of the Episcopal Hospital, under my care, with an extensive compound comminuted fracture, involving the left orbital, frontal, and temporal regions, the result of a charge of shot received at a distance of about fifteen feet. The whole of the right eye was destroyed, including nearly all the eyelids. The supraorbital ridge was bared and fissured, as well as about three square inches of the vertical plate of the frontal bone. The nasal bones were fractured, and the upper half of the right cheek and soft parts of the same side of the forehead were extensively lacerated. The charge had entered obliquely from below upward and to the right, producing a large, ragged opening through the back and upper portion of the orbit, capable of admitting with ease two fingers. The anterior portion—perhaps the whole—of the right temporal fossa was forced outward at its anterior part, apparently from the impact upon its inner surface of the charge of shot, leaving a fissure nearly corresponding to the temporal ridge into which the whole middle finger could be laid,—*i.e.*, it was about two-thirds of an inch wide. Brain-substance oozed from this fissure and also from the orbit. There was nearly complete paralysis of the left arm and apparently of the leg when I saw her, and right-

sided facial paralysis. Total hemiplegia existed the next morning. She remained unconscious for four days.

October 24. She spoke a few indistinct words, and attempted to answer slowly when spoken to.

October 25. She remained in a semi-conscious condition, with considerable delirium, uttering at times loud screams. The speech slowly improved and the delirium subsided, but the hemiplegia remained complete until November 28, 1885, when she for the first time moved the fingers and toes of the left side. She could also slightly flex the left leg, but could not extend it again. In two days more she could feebly grasp with the left hand and extend the leg. On the evening of the same day a small sequestrum was removed from the outer edge of the bared bone.

February 16, 1886. The hernia cerebri, which formed shortly after the accident, has all subsided, she can walk with ease, and the grasp of her left hand is good, although weaker than that of the right. A shell of the outer table of the frontal bone, including about half of the split external angular process, was removed to-day. The major part of the enormous wound is cicatrized, what is open being filled with healthy granulations. Menstruation, which was interrupted, is now regular.

These very brief notes, abstracted from those kindly furnished me by my former resident, Dr. H. Robb, very inadequately describe an injury such as is rarely recovered from. Apparently serious injury was done to the centres of the arm and leg, producing the partial paralysis, which became complete so soon as cerebral inflammation supervened, to disappear again as the exudates were absorbed. Antiseptic treatment was adopted, and only gentle pressure applied over the hernial protrusion.

DISCUSSION.

Dr. William B. Hunt: Speaking about injury of the orbit and fracture, while I was a resident a case came into the Pennsylvania Hospital where the orbit was injured. There appeared to be an immense quantity of brain-substance oozing out, and the surgeon in charge at once gave a fatal prognosis. What appeared to be brain-substance turned out to be nothing but the delicate fat of the orbit. It was very deceptive. In the case reported to-night it is evident that these centres were not destroyed, but only injured by pressure, possibly from hemorrhage.

I would also call attention to a case which I reported in the "International Encyclopædia," which is the only one of this kind that I have met with. A sailor was attacked with heat-fever when four days out from port. In the delirium he tried to throw himself overboard, but was prevented. He then sought a secluded place, and with a hatchet beat in his skull and then removed the pieces of bone himself. He said he felt better then. Four days later the vessel arrived in New York. Having friends in this city, he came here, and walked into the Pennsylvania Hospital with his hat on. There was found an extensive fracture of the skull. Soon paralysis of the arm and leg of the side opposite that of the injury appeared. One day in dressing the wounds a piece of bone one inch by one and three-quarters, which had escaped detection, was found and removed, and at once the paralysis disappeared. The destruction of the brain was, however, so great that softening continued, and the man finally died.

Dr. Charles B. Nancrede: I do not believe that in the case I have reported the centres were destroyed, and I did not say so; but I do say that it will be found that a force applied from within sufficiently powerful to drive out the amount of temporal fossa, as I have described, followed at once by an inability to use the limbs, which by the next day has developed into complete paralysis, must have injured these centres. I do not see how the covering of this portion of the brain could be lifted off without injuring the centres beneath. I think there was not sufficient hemorrhage to account for the symptoms. I have reported a case where a knife-blade was in the brain for nine weeks and the patient was not aware of it. It was just back of the fissure of Rolando. Some one had taken out the blade before I saw him. He then had violent convulsions, and I trephined the skull and found a little scaling of the internal plate. Then he showed symptoms of brain-abscess: he was completely paralyzed on the opposite side. One morning when I came to the hospital I was told that he was dying. I at once took out my pocket-case and laid open the scalp, and with the aspirator made three or four punctures into the brain through the opening in the skull without finding pus. I next began to trephine rapidly in front of the first opening. When I got about half-way through, the pulse stopped, and some six or seven physicians who were present pronounced him dead. I was about giving up the operation, but decided to complete it and remove the button of bone. I then found a drop of pus coming from one of the punctures which I had made. I then plunged a bistoury one-third of an inch into the brain, and out gushed two ounces of pus. We then resorted to methods for his resuscitation, but it was three or four minutes before he began to breathe at all, and it was an hour before he was able to breathe by himself. Before the operation the man was completely paralyzed on the right side, but before I left the hospital he attempted to use the right arm. The man lived six days after the trephining.

In the case that I have reported I believe that the centres were injured at the time of the accident, and that the symptoms were the

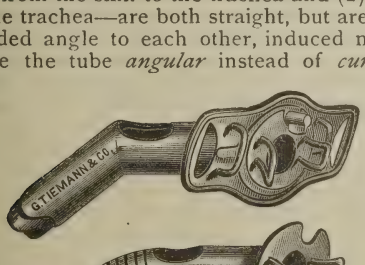
result of the pressure of inflammatory exudation, which has been absorbed, accounting for the return of function.

Dr. William W. Keen read the following paper on a

MODIFICATION OF THE TUBE FOR TRACHEOTOMY.

In the Medico-Chirurgical Transactions for 1879, Mr. R. W. Parker proposed a modified curve for the tracheotomy-tube, making the tracheal portion nearly vertical, so as to follow the direction of the trachea. His object was to avoid the pressure against the anterior wall of the trachea by the lower end of the ordinary tube, which has a uniform radius of curvature. This pressure, as he showed, not seldom resulted in ulceration, and sometimes in serious hemorrhage.

The anatomical reason is a valid one, since the trachea runs at an angle with any tube inserted from the skin to the calibre of the trachea. The fact that these two parts—(1) that from the skin to the trachea and (2) that in the trachea—are both straight, but are at a decided angle to each other, induced me to make the tube *angular* instead of *curved.*



This is the first modification. The length of the first part or "shank" must be varied to suit different necks, as the trachea lies at different depths from the surface.

The angular form of the tube would preclude a rigid internal tube, and I have therefore made part of the inner tube of flat spiral wire so that it will bend at the angle. This is the second modification.

The lower end I have bevelled anteriorly and posteriorly, both to facilitate its introduction and to avoid any pressure against the anterior and posterior wall of the trachea,—this being the third modification.

This inner tube is slightly longer than the outer, to avoid the blocking of the outer by accumulating mucus.

There may or may not be an opening in the shank to facilitate the return of normal breathing as the larynx resumes its normal function.

The instrument has just been made for me by Tiemann, of New York, but I have had no opportunity as yet to test its advantages or disadvantages.

*

DISCUSSION.

Dr. Thomas G. Morton: I have never seen ulceration of the trachea from the tube. I have seen ulceration of the skin, but have never had any trouble with the ordinary tube. I think the tube need not go far into the trachea,—just sufficient to enter it. I should not like the tube to enter so far as the one presented to-night would.

Dr. Charles B. Nancrede: Is not the ulceration due to the fact that the tube is left in too long? The rule is now to remove the tube at the end of twenty-four or forty-eight hours, and replace, if necessary, another somewhat different in size or curvature. With reference to the fenestræ, I think that, as a rule, they will be found outside of the trachea. I never use a tube with a fenestra if I can avoid it.

Dr. J. M. Barton: My attention was strongly called to this point with reference to the fenestra in a case of syphilitic stenosis of the vocal cords, with some spasm. On the withdrawal of the tube, the patient required its rapid replacement. I tried to close the end of the tube temporarily and permit her to breathe through the fenestra. This she could not do, and I found that the fenestra did not enter the trachea. With the laryngoscope I was able to see the tube and mark the appropriate place for the opening, and I found that the posterior limit of the fenestra in the tube was about where the anterior limit should have been.

Dr. William Pancoast: I have thought that the introduction and withdrawal of the tubes was a great source of annoyance and irritation, and in my last few operations I have discarded the tube altogether. I think that it is often used when not necessary. I prefer to take out a piece of the trachea and so stitch the opening as to keep it patulous. Unless there is actual narrowing of the trachea itself, I think that there is no necessity of a tube to keep it open.

The President, Dr. D. Hayes Agnew: The object of the tube is not to dilate the trachea, but simply to keep open the orifice made into the trachea. I have never seen any trouble, such as ulceration, follow the use of the tube. While there are still some who prefer to keep the opening patulous by the introduction of sutures or some dilating instrument, yet I think that all will finally come back to the tracheal tube, modified perhaps in the way suggested by Dr. Keen.

Dr. William W. Keen: I think the diameter of this tube will at once show that it cannot act as a dilator of the trachea. One objection to a tube barely long enough to enter the opening is that in the movements of respiration and the muscular movements of the head it may be displaced. The portion of the tube within the trachea should be in its axis, and not present a uniform curve. This curvature brings the lower end of the tube

against the anterior wall of the trachea, and a number of instances are on record where there have been both ulceration and hemorrhage, even of a fatal character. I have made only slight modifications in Parker's suggestion, the principal one being in having the inner tube made of spiral wire so as to overcome the angular difficulty.

It is impossible that the fenestra in this tube shall become closed, for it is directly in the axis of the vertical tube.

Dr. O. H. Allis: I am sorry to hear our President say that we shall all come back to the tube. The only case that I ever saved was one in which I dispensed with the tube and inserted little traction-ligatures. Thirty-six hours later I attempted to put in a tube, and nearly killed the child by pushing a little piece of mucus before the tube. The child is, however, no safer without the tube than with it. As much care is required as where the tube is used. There is a tendency for the opening to gum up, and difficulty of breathing ensues. In my case a little chloroform placed over the opening was sufficient to quiet the child until these collections had been removed. The use of little retractors to keep the wound open would, I think, be desirable.

The President, Dr. D. Hayes Agnew: If retractors were kept in for any length of time, there would be the same objection as is urged against the tube: namely, there would be pressure and ulceration.

Dr. Charles B. Nancrede: The operation of tracheotomy is not a simple one. I agree with Billroth when he says that he blames no surgeon for declining to perform tracheotomy in a child. In the first successful case of tracheotomy for diphtheritic croup, no tube was used. A crucial puncture through the trachea was made. That child probably would have recovered without an operation.

Most of the cases on which I operate are for diphtheria, and I should not like to use chloroform, as has been suggested, in that disease. As most of the cases have to be left in incompetent hands, I prefer to insert the tube.

A short time ago I was called to the country to see a case in which the surgeon said he had opened the trachea but had failed to get the tube in. There was great infiltration and swelling from the first wound, which was made above the cricoid cartilage. After considerable dissection, I opened the trachea and introduced the tube. In such a case I think the tube could not have been dispensed with. I believe that more children will die where the tube is not used than where it is employed.

Dr. Thomas G. Morton: I have never operated on a case where I did not use the tube, and in most of the cases that I have operated on the operation had to be done instantly. In a recent case of diphtheria the child was apparently dead when he was carried to the window. I at once opened the trachea and inserted the tube, and had the father inflate the chest, by which he contracted the disease. Both the boy and the father recovered. There is usually no time to cut out a piece of the trachea. I always remove the tube as soon as possible.

Dr. Samuel Ashhurst: We do a number of tracheotomies at the Children's Hospital, and we use the ordinary old-fashioned tube with a guide to facilitate its introduction. I have never seen any necessity for any modification. The trouble does not come from the tube, but usually from the extension of the disease. The introduction of the tube, while it may not save life, gives great relief to the breathing.

Dr. William Pancoast: Some years ago I had the same idea as that mentioned by Dr. Allis, and had made two pieces of silver wire, bent over and secured behind with a strap and buckle, to keep the wound open, but I found that it was irritating and would gum up.

I have considerable doubt whether the operation of tracheotomy is a justifiable one in diphtheritic croup in children. I have seen a great many of these operations, and I have performed a few myself. The patients generally die. Recently I have had two cases in which my opinion with reference to the performance of the operation was asked. I said that I did not believe that the operation was a cure for the disease, but it would give a chance to breathe, and that, if I were requested, I would perform the operation. In both these cases the operation was not performed, and the children recovered. If they had got well after the performance of the operation, the recovery would probably have been attributed to that procedure. The query in my mind is, Would not those cases of diphtheritic croup which recover after tracheotomy have got well if the operation had not been performed?

Dr. Thomas G. Morton: I wish to relate a case in which I adopted a procedure which has been practised, but which I had never employed before. The case was that of a man 73 years of age, with an enormous prostate, so large as to suggest the presence of a tumor. The urine had to be drawn with the catheter on every occasion, giving rise to intense suffering before, during, and after its introduction. Last week I performed the supra-pubic operation. The bladder was exceedingly contracted, never holding more than one ounce of urine. I introduced into the rectum an india-rubber bag, and injected into it twelve ounces of water. I then slowly injected into the bladder eight ounces of water. After making the incision at the lowest part of the abdominal wall, it was with difficulty that I reached the bladder, and I saw it only on one occasion, and that was when I inserted a hook into it. I then with my finger carried down a bistoury, opening the bladder.

and draining off the water. I then put in a glass tube, which I removed at the end of forty-eight hours. I cut an ordinary stomach-feeder into sections five inches in length, fitting to one end a glass tube and cork. Since the operation there have been no bad symptoms, and the patient is comparatively comfortable. I do not know that experience has shown any tube better than that which I have used. The distention of the rectum to steady the bladder is described by Sir Henry Thompson. In this case, I think that I could hardly have reached the bladder if it had not been for this measure.

Dr. William Pancoast: I should like to ask the experience of the gentlemen in regard to amputations of the finger through the meta-carpo-phalangeal joint: whether they follow the old plan of taking the flap from the palmar surface, and whether they find the cicatrix on the dorsum of the hand painful. I have seen many cases in which the cicatrix has been excessively sensitive. For the past three or four years I have performed a modified operation, reversing the incision, thus leaving the natural covering to the knuckle. The objection to this has been that the scar would be painful; but this is not the case. I have adopted a similar plan in operations through the knee-joint. I make an incision through the skin, a little longer in front than behind, then turn the skin up and cut the muscles off short. The flaps are then brought down, and I have had a beautiful result so far as the operation is concerned.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, FEBRUARY 4, 1886.

The President, B. F. BAER, M.D., in the chair.

DR. CHARLES MEIGS WILSON read a paper on

CASES OF LACERATION OF THE CERVIX UTERI WITH UNIQUE SYMPTOMS.

The histories of the following cases are brought before the Society in order, first, to record what the writer believes to be unique symptoms of the lesion, and, secondly, to elicit discussion in reference to the reflex nervous symptoms of the lesion, and, if possible, to draw the line of demarcation between them and the nervous phenomena of alienation. But a few years back we were given the doctrine, *ex cathedra*, that lack of contour of the cervix uteri was the principal cause of that train of nervous symptoms of which the histories here cited contain unique examples. Prior to this, the clitoris was supposed to be the source of all the trouble. And, now that spaying has become the fashionable surgical procedure, the ovaries have been given the precedence in the causation of the grave reflex nervous symptoms attendant upon pathological conditions of the pelvic viscera. Statistics have pretty well proved that, in a large majority of cases, destruction of the natural contour of the cervix has been the starting-point of pelvic distress. The subinvolution, with the subsequent conditions of prolapsus, hyperæmia, hypergenesis of tissue, ectropion of the cervical membrana mucosa, and the inflammation set up by friction of the everted cervical mucous membrane against the posterior vaginal wall (which frequently occurs in neglected cases of laceration of the cervix), are undoubtedly the primary factors of pelvic irritation in many cases; and it is easy to see how this condition may set up pathological conditions of uterus, Fallopian tubes, and ovaries secondarily. To say precisely what is to blame is a very difficult matter. The following cases are selected from a large number operated upon by Dr. E. Wilson in private practice, and by the author in the surgical wards of the Philadelphia Lying-in Hospital.

Case I.—Mrs. McF., æt. 32, married, mother of three children, presented herself at the clinic of the Lying-in Charity with the following symptoms. For the past year she had noticed a tumor about the size of a small fœtal head in the right lumbar and the right half of the umbilical region. The tumor was perfectly smooth, non-nodulated, and freely movable in the abdomen. She had had obstinate constipation, a good deal of vesical irritation; at one time had had a sanguineo-purulent discharge from the vagina; this had entirely ceased for the last seven months. She complained of deep-seated, darting pain in the lower part of the abdomen, backache, intense cephalalgia, and photophobia. Her last child had been delivered fourteen months previously with instruments. She had been under the care of a prominent gynæcologist, who had diagnosticated floating kidney and recommended extirpation. After a careful examination, in which I was aided by several professional friends, the diagnosis previously made was concurred in. A careful chemical and microscopical examination of the urine failed to detect any abnormal constituent. It was then determined that laparotomy for removal of the kidney, or cutting down upon it and stitching in proper place, would be alike unjustifiable. Upon making a more careful examination, including the uterus, the patient was found to have an extensive bilateral laceration of the cervix. The contour of the cervix was restored; and, although the patient still has her floating kidney, all her distressing symptoms have ceased.

Case II.—Mrs. S., æt. 32, married, mother of two children; pelvis slightly contracted antero-posteriorly. Both children were delivered alive by forceps. This patient was sent

me by her regular attendant, with the diagnosis of cancer of the rectum. She suffered greatly from backache and headache, was constipated, passed ribbon stools, and had agonizing pain upon defecation. She had slight vaginal discharge, and a coffee-colored, foul-smelling, muco-purulent discharge from the rectum. Rectal examination revealed an ulcerated surface extending apparently for about an inch and a half in length completely around the rectum, about three inches above the anus. Small portions of the granular surfaces of the tumor revealed, under the microscope, no evidence of malignant growth. Specular examination of the vagina showed extensive bilateral laceration, with acute retroflexion. The woman presented no evidence of cachexia. The uterus, though closely bound down by adhesions, was finally restored to its proper axis. After several weeks the contour of the cervix was reformed. Simple astringent applications were made four or five times to the rectal ulcer. The patient made a complete recovery, and has had no return of symptoms since the operation.

Case III.—Mrs. C., æt. 22, mother of one child, with history of tedious instrumental labor. This patient suffered from violent ovarian neuralgia, augmented at the catamenial periods. She had a profuse leucorrhœa, engorged uterus, and enlargement of the right ovary. She also suffered at times from suicidal dementia, which was sometimes so violent that she required restraint. Her case had been diagnosticated pyosalpinx, and oöphorectomy advised. Examination revealed an extensive bilateral laceration of the cervix, extending on the left side to the vaginal junction. The cervix was restored, with complete cessation of all symptoms. Examination six months after the operation failed to find tenderness or enlargement of the right ovary.

Case IV.—Mrs. S., æt. 37, married, mother of five children. This patient had been incarcerated in a private asylum for fourteen months, suffering with violent dementia. She had the typical appearance of alienation. No clear history could be obtained of her symptoms, except that she had distressing pelvic pain and profuse leucorrhœa. Examination showed extensive laceration of the cervix. Trachelorrhaphy was performed, with immediate amelioration of the symptoms. Two months after the operation she was restored to her family completely well. A year or more has elapsed since the operation in each of the cases, and the relief afforded has thus far been permanent. These cases appear to the author to have had unique symptoms following and consequent upon the lesion, though doubtless those with more extended chances of observation have met with cases presenting analogous symptoms.

Dr. Joseph Price made some remarks upon the effects of cicatricial tissue in the edges and at the apex of the laceration, and the effect of the laceration in inducing local engorgement and hypertrophy, and thus a long series of consequential symptoms. He spoke of the value of rest and local treatment for the relief of these symptoms; but the relief so obtained is temporary. It will last but a few months, and sooner or later, after the patient is discharged as cured, the same symptoms recur. If the cicatricial tissue is not all removed and complete union secured throughout the entire thickness of the cervical tissue, the symptoms will return or even be aggravated by the operation. In his experience, conception results after operation in young women.

Dr. Howard A. Kelly remarked that he was glad to hear of the good results in Dr. Wilson's cases, as a year or more had elapsed. He thought cases of laceration of the cervix might be arranged in three classes. 1st. When the cervix, although lacerated, remains soft and flaccid, there will be no consequent symptoms. 2d. When cicatricial tissue is developed or ectropion is present, marked reflex symptoms will ensue. 3d. When there has been natural repair, but with inclusion or formation of hard or scar tissue, there will also be marked reflex symptoms. To this latter class belong those cases, with hypertrophied glands and everted lips, of so-called erosion. These second and third classes must be relieved by rest and local treatment, and then operated upon to keep them well. Complete removal of the hard tissue and perfect union of the coaptated edges must be secured. Failure in either of these points will cause a return of the symptoms.

Dr. Baer remarked that the symptoms were not due to the laceration, but to its inflammatory consequences. To secure a good result the inflammatory condition must first be subdued, and then the operation of closing the laceration will be in order. It may take a long course of treatment to secure this necessary condition, but operation will probably fail to secure the desired relief without the preparatory treatment. He has found in some of these unsuccessful cases union of the external surface only, and in others fistulous tracts between the suture-points. Cicatricial tissue seems to be sometimes formed after operation when union occurs by granulation. Simple laceration without ectropion is very rare, and he would advise repair of the laceration in all cases, to prevent future resultant inflammatory conditions. It is desirable to have union by first intention, to avoid formation of cicatricial tissue and suture-track fistules.

Dr. Wilson spoke of the choice of method in preparatory treatment. Local treatment once a week will often fail to have a good effect, when a week or ten days in bed, with

douches of hot water and glycerole of tannin on pledgets of cotton applied daily, will accomplish rapid relief of the local condition. Great care should be exercised in the removal of tissue, as complete closure of the cervical canal may happen. He has seen two such cases which were detected at the next menstrual periods after the operation. The passage of a spear-pointed probe gave vent to dark grumous material.

Dr. HOWARD A. KELLY exhibited a specimen of

HÆMATOMA OF THE OVARY, WITH ADHERENT FALLOPIAN TUBE.

This specimen is an example of a class of cases which stand peculiarly by themselves: cases of aggravated tubal and ovarian disease, on a small scale as compared with ovarian cyst, and yet in which there is enough change in the size and consistency in one or more of the structures of the appendages to afford most satisfactory ground for diagnostic precision under skilled bimanual examination. These cases occupy a middle ground between the larger tumors, where disease is so palpable, and those hap-hazard attempts, the present reproach of gynæcological surgery, in which the operation upon appendical structures is undertaken to relieve a *symptom*, and the diagnosis of pathological ovarian or tubal change is made after removal or not at all.

This is the right ovary of a patient 21 years of age. It is about the size and shape of a large Spanish chestnut. I was able to handle it freely by bimanual examination, and determined exactly its size, shape, consistence, and relations before operating. The indications for operative interference after I had made my diagnosis were greater than in the case of any large ovarian cyst I have ever seen, and the prospects and result of any form of palliation were futile. Almost the whole of this large ovary is filled with a blood-clot, soft and jelly-like in part, and in part firm, fibrous, and apparently intimately united to the ovarian stroma. This clot is surrounded by a shell of apparently normal ovarian tissue, throughout which are seen a number of follicles and old corpora lutea. A remarkable feature is the way in which the fimbriated extremity of the tube is spread out like a sucker over the surface of the ovary and glued fast by adhesions, so that the line of demarcation between tube and ovary is but faintly indicated. From the line of junction numerous vessels course in a radiating manner down over the ovary. The left ovary is below normal size, but contains many pea-sized black clots.

The second specimens which I now exhibit were removed this afternoon. The case is an example of the third class, in which the operator has nothing but a symptom to guide him. My patient, 35 years of age, suffered from an increasing menorrhagia for fourteen years. Lately she has been bleeding half the time. She has had recourse to every possible plan of treatment, with but slight and temporary relief. The only thing I could do was to perform oöphorectomy and stop her menstruation. One ovary weighs one hundred and thirty-nine grains, the other one hundred and three grains. A beautiful corpus luteum of menstruation, about two and a half weeks old, shows that the hemorrhages, which retained all along a menstrual periodicity, were in reality menstrual. The tubes are free from disease. In one ovary a globular pellucid cyst lies between the layers of the broad ligament, in close proximity to the fimbriæ, the tubo-ovarian ligament being spread out over its surface.

Dr. WILSON called attention to the fact that in the first specimen the tube had been occluded by a torsion or twist upon itself.

Dr. BAER remarked that it would be interesting to know the results in Dr. Kelly's last case. In such a case there is of necessity a cause for the hemorrhage; there is no apparent diseased condition of ovary or tubes sufficient to account for it. Hemorrhages from the uterus are often associated with vegetations upon its lining surface; but these are not always present. He alluded to one case in which hemorrhage continued to be profuse after the removal of the tubes and ovaries, which had been very much diseased.

Dr. PRICE remarked that in this last instance the continued hemorrhage might be the result of body-habit, although the original cause might be removed.

Dr. HARRIS spoke of a case of fibroid tumor of the uterus with menorrhagia in which removal of the tubes and ovaries gave complete relief.

Dr. KELLY had, eight months ago, removed both ovaries and tubes, and the menorrhagia still continues. In the case operated upon to-day the curette had been used, but no vegetations had been found. A strong tincture of iodine applied thoroughly to the inside of the uterus and vaginal packing would quickly stop the hemorrhage for the time; but it would soon recur. Operation was performed to relieve the symptom hemorrhage, by bringing on the menopause, and not because the ovaries were supposed to be diseased.

Dr. J. PRICE exhibited specimens from a case of

PYOSALPINX.

The tube was large as the finger and cheesy in consistence, and was easily broken, even by the bite of the hæmostatic forceps. The patient was in a typhoid condition, with high evening temperature, emaciation, quick pulse, and pain in locomotion. There certainly had been leakage of pus before, but two ounces escaped at the time of removal. Adhesions were numerous, but were cheesy and broke down readily. After the operation there was

rapid subsidence of the pulse and temperature, with the other symptoms. Free washings of the abdominal cavity through a drainage-tube were practised for a few days. There was a clear history of gonorrhœa. The other tube and ovary were not enlarged.

Dr. BEATES remarked that in one case upon which he had operated repeated attacks of peritonitis had caused large deposits of flaky lymph in Douglas's cul-de-sac. These were nicely removed by sponging.

Dr. BAER raised the question of the gonorrhœal origin of the salpingitis in Dr. Price's case, which was unilateral, while gonorrhœa usually causes both tubes to become diseased.

Dr. PRICE stated that Dr. Tait's new book reported a gonorrhœal case of unilateral salpingitis. Comparison with the male analogue epididymitis, which is usually unilateral, would support the idea of such an origin. A free leakage of secretion from the tube and absence of constriction may prevent the accumulation of pus on one side.

Dr. BEATES exhibited specimens from a case of

DIFFUSED SARCOMA UTERI, WITH METASTASIS TO LIVER AND LUNGS.

The patient from whom the specimens were obtained was in excellent health until the development of this affection, æt. 59. Catamenia established during her sixteenth year without undue disturbance. She has had four children, and no miscarriages or pelvic disease during her sexual life. There is no evidence of heredity towards myoplastic disease. Menopause at age of forty-eight, without incident. About five years later a hemorrhage occurred, lasting a few days. It recurred with decided regularity, and the patient, believing it to be menstrual, did not have recourse to treatment until an intermenstrual sero-sanguinolent discharge appeared. Later this assumed a purulent type, and was accompanied by constant pain. The condition was now regarded as carcinomatous. In June, 1885, I found the patient emaciated, cachectic, and weak. Digestion was impaired and the stomach irritable. Local pain was intense, with nocturnal exacerbations. There was also incontinence of urine, and its consequent intertrigo. The vagina was so occluded with numerous neoplasms, varying in size from mere nodules to the size of an olive, that an examination of the uterus was impracticable. Some of these were pedunculated. There was an offensive ichorous discharge; bleeding occurred upon the slightest touch. The history was one of progressive asthenia.

The autopsy, by Dr. Formad, disclosed the pulmonary apices and inferior posterior margins to be the seats of nodular masses. The surface of the left hepatic lobe was the seat of two deposits which simulated encephaloid carcinoma. The lymphatic glands were perfectly normal. The uterus was enlarged about one-fourth, and its attenuated walls were easily torn; upon opening it was found to be almost entirely destroyed by ulcerative processes, which were most marked near the fundus. The cavity of the pelvis was occupied by the morbid mass, and the vagina was entirely destroyed. The bladder was not involved, but the urethra was sloughed through; rectum free. The microscope showed a small-cell sarcoma. The pathological laws of which this is an illustration possess especial interest regarding treatment. It is now well known that neoplasms originating in areas that have developed from either the epi-, meso-, or hypoblast possess certain specific life-histories, and, while all may closely resemble one another in their incipiency, differ widely not only in their course, but ultimate results, as they continue to exist. Thus, epithelioma of epiblastic structures is local and not subject to metastasis, while the hypoblastic epitheliomata are pre-eminently metastatic. Mesoblastic neoplasms are of connective-tissue type and in large-cell forms, local, while in small-cell varieties metastatic. Epitheliomata undergo metastasis through the lymph-channels; sarcoma, by means of the blood-vessels. Either of these diseases when first becoming active, there is good reason to believe, is local, and before retrograde changes occur can by total removal of the organ involved be radically cured. As sarcoma, and especially its small-cell variety, is especially prone to metastasis, its early recognition is a matter of paramount importance. In this case its early evidence was mistaken for carcinoma, and from a clinical stand-point alone such an error is unavoidable, but, as the discharges contain portions of the neoplasm readily recognized by the microscope at a time when metastasis has not occurred, its diagnosis and treatment are a matter of simplicity. The later symptoms, absence of lymphatic involvement, and comparatively slow course, enable one to know that he is palliating the sufferings of a sarcoma.

W. H. H. GITHENS, M.D.,
Secretary.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 4, 1886, the President, A. JACOBI, M.D., in the chair.

LIMITATIONS IN THE VALUE OF GLASSES FOR THE IMPROVEMENT OF VISION AND THE RELIEF OF DISEASE.

Dr. D. B. ST. JOHN ROOSA read the paper, in which he first reviewed the invention of test-types,—Snellen's and others,—and passed to the consideration of the eye-diseases which occurred most commonly in public and private practice. Statistics taken from the records of an institution in Brooklyn and one in

New York showed that a very large percentage of all cases consisted of lesions of refraction or accommodation. Nowadays many cases of headache were sent to the ophthalmologist to determine whether the disease was not due to a lesion of refraction or accommodation. Dr. Roosa related a case which illustrated his view that in many instances an imperfection in vision was only a limited or temporary factor in the production of a neurosis. Too much stress should not be laid upon the possible value of correction of a lesion of refraction or accommodation in relieving a neurosis. Many persons, he believed, had got along without glasses, although their vision was not normal, and never suffered from a neurosis or reflex difficulty which could be traced to the eyes. Neuralgia, chorea, insomnia, epilepsy, were among the diseases which it had been claimed might be caused by difficulty in performing the function of sight.

Dr. Roosa quoted freely from Donders, and said he was not at all sure but what that gentleman had conferred as material a blessing upon the human race, in teaching us the full use of convex and cylindrical glasses, as had been conferred by any one man.

The author then read the histories of a number of cases taken from his case-book in illustration of the text of his paper. In one case the use of convex glasses gave relief from pain in the back part of the eye; in another, convex glasses gave relief from the habit of winking; in another, glasses relieved headache; but in others still, glasses failed to relieve headache, and Dr. Roosa thought the practitioner who hoped to cure this malady by the use of glasses would be disappointed in cases in which there was not marked deviation from normal visual power. He made the comment in one case that it was not the only one in which he found that a combination of prisms with correcting-glasses did not seem to do as well as glasses without prisms. In another case, one of hypermetropia with a considerable degree of opacity of the lens, no relief was obtained from glasses. The case was of some interest to ophthalmologists as going to show that there might be spasm of the ciliary muscle when one part of this ring of muscular tissue was more involved than the other. Another case was that of dizziness and double vision in a young boy, who obtained nearly complete relief by the use of glasses. Another case, of "unsteady head," was relieved by wearing glasses. In case fourteen there was asthenopia in a nervous man, who obtained considerable but not complete relief by wearing prisms.

Dr. Roosa also gave examples of neuroses in which it was impossible to obtain relief by treatment directed to the eye. He could not, he said, expect from glasses all that had been claimed by some authorities on the one hand, while on the other he feared that, even after all these years which had elapsed since the publication of Donders's work the whole profession was not fully alive to the value of glasses in the relief of symptoms, especially those referred to the head and eyes.

"Uterine asthenopia" he had never been able to alleviate by treatment directed to the eyes. In neurotic subjects the pains were very apt to fly to another part of the body, and cures in these cases depended as much upon the mental characteristics of the attending physician as upon those of the patient. That glasses would cure organic disease in parts remote from the head, Dr. Roosa was not yet prepared to believe. Errors of refraction and accommodation sometimes caused serious functional disturbances beyond those of vision. But, again, hypermetropes might live to become presbyopes without having asthenopia. Some myopes went through life without optic symptoms. Our imperfect knowledge as yet did not enable us to say what were all the factors in a given case of disease, and a narrow specialism would never find any comfort in the study of the woes of the human body.

Dr. DAVID WEBSTER agreed with all that Dr. Roosa had said, and thought he had given a faithful picture of the ophthalmologist's every-day work.

He thought the number of cases of errors of refraction, of troubles of accommodation, and asthenopia exceeded that of any other class of cases. The fact was that not more than six out of a hundred persons had normal vision; but the proportion of these requiring the assistance of the ophthalmologist was small. But why some should require treatment and others not was difficult to answer. Perhaps the majority of cases requiring treatment had some fault with the general health. If anything occurred to depreciate the system, the eyes would probably be weakened at the same time. He believed, with the author, that there was a limitation to the value of spectacles in these cases. But with regard to the limitations of reflex neuroses caused by eye-strain he did not feel assured. He had seen very many cases of headache, dizziness, vertigo, nausea, cured by a proper adjustment of glasses, or by division of the muscle which was too strong for its fellow. He had also seen spasm of the orbicularis palpebrarum relieved entirely by the use of atropia, followed by glasses. He did not know but that other functional disturbances of the nervous system might be caused by eye-strain and be cured by treatment directed to the eyes, but he did not believe that organic uterine disease, or rectal disease, lung-disease, etc., could be cured by such treatment. He had seen some cases in which very marked results followed the use of prisms, even prisms of very low degree. Dr. Webster then related some exemplary cases.

He made it a rule not to order glasses

which were uncomfortable to the patient while in his office, otherwise he would be likely to cast them aside. He had in quite a number of cases used the faradic current about the eyes in conjunction with glasses for the relief of asthenopia, and he thought the benefit derived from it was such as to justify its more common employment.

Dr. CHARLES S. BULL thought all would agree with what had been said by Dr. Roosa. He believed that of late years, and especially in this city, too much importance had been attached to eye-diseases as the cause of reflex troubles.

Dr. EMIL GRUENING said that one kind of glasses which he had often prescribed had not been mentioned by the author,—namely, window-glasses: that over one eye being left clear, the other being ground in a manner to shut off vision from that eye, but being apparently clear to a second person. The advantage of such glasses was observed in cases of diplopia which caused nausea and dizziness. By cutting off the sight of one eye double vision was cured, and with it nausea and dizziness ceased.

Dr. R. W. AMIDON said that neurologists had been convinced for some time of the advantages of glasses in certain cases of reflex neuroses. He agreed in general with Dr. Roosa, but he would perhaps limit the application of glasses in cases of reflex neuroses even more strictly than the author. His experience had taught him that frontal headache had come more frequently from errors of refraction, while posterior headache came more often from inefficiency of the ocular muscles. As to the influence of the general health in the causation of asthenopia, he had been forcibly impressed with its importance, and had generally given patients tonics for the improvement of their health. If after a course of tonics their asthenopia continued, he tried the influence of glasses. Patients often asked whether they would ever be able to discard glasses should they once begin their use, and in some instances he felt warranted in telling them that it was probable they could do so after measures had been employed for strengthening the general system. Not as much stress had been laid upon the injurious effects of insufficiency of the external muscles of the eyes, particularly in neurotic women, as he would do. Dr. Amidon had seen wonderful results from the constant or temporary use of prisms.

Dr. ROOSA said that the ophthalmologists of this city had been accused both by neurologists and other ophthalmologists of not fully appreciating the value of glasses, but he contended that they were not behind the times, and that they were in advance of neurologists in this direction, with a few marked exceptions.

The PRESIDENT thought the discussion showed that neither neurologists nor ophthalmologists looked upon the eye as the whole, but only as a part, of the body.

Dr. GRUENING was unable to conceive how prisms could be of benefit.

EXHIBITION OF A NEW ELECTRIC LIGHT.

Dr. H. G. PIFFARD presented an electric battery of fair constancy. It would throw a light of from four to six candle-power for an hour. The cheapness of the instrument, its small size, and its fair constancy made it preferable to others which he had seen, and it was particularly valuable in surgery and examinations at night.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held February 24, 1886, the President, JOHN A. WYETH, M.D., in the chair.

THE RELATION OF CANCER OF THE LIVER AND GALLSTONES.

DR. NEWCOMB presented the liver removed from the body of a German, who entered the hospital with an enlarged liver, ascites, and symptoms which led to his death nine days after admission. He was tapped once, and two hundred ounces of fluid withdrawn from the abdominal cavity. The patient denied syphilis, but his condition was such that little reliance could be placed upon his statements. He was addicted to alcohol. The chief interest at the autopsy was found in the liver. The organ contained large and small cancerous nodules; the cystic duct was occluded by a gallstone of the size of a hazelnut, and probably as many as four hundred small gallstones occupied the gall-bladder.

Dr. Newcomb said that it was now generally admitted that gallstones and carcinoma of the liver occurred not infrequently together, and the question of possible causative relation between the two was an interesting one. It was not known whether the carcinomatous disease of the liver so interfered with the bile-secretion as to cause it to become thickened and so altered as to form the nucleus for stones; or whether gallstones might not excite an inflammation in the gall-bladder and surrounding liver-tissue, which latter underwent a carcinomatous change.

This case in which ascitic fluid continued to escape through the puncture reminded him of another in which the trocar and canula were introduced, fluid withdrawn, and subsequently on attempting to introduce the trocar at the same place it struck something hard, and, with a fair degree of force, refused to enter. The hypodermic needle penetrated, and fluid was withdrawn with it. He thought it probable that an inflammation had been set up by the first puncture,

which led to cicatrization, hence the board-like object struck by the trocar.

The PRESIDENT had used a certain trocar and canula in numerous instances, and the instrument had never failed until he once tried to puncture the scrotum to withdraw fluid from the tunica vaginalis. Several forcible attempts failed to cause the instrument to enter, and on examination it was found that the edge of the canula had been dulled, probably by falling on marble from the hands of the nurse who cleaned the instrument. Possibly such would have been found to be the explanation of the difficulty met with by Dr. Newcomb.

Dr. CARPENTER thought that since cancerous nodules were not present in other organs, and inasmuch as syphilis had not been positively excluded, it would be well to examine Dr. Newcomb's specimen microscopically, for primary carcinoma was regarded as a rare affection. He had seen, however, the statement attributed to Dr. Pepper that carcinoma of the liver was nearly always a primary affection. The statement was an extraordinary one, and he was disposed to think Dr. Pepper had been incorrectly reported.

Drs. J. C. PETERS, FRANK FERGUSON, and the President testified to the rare occurrence of carcinoma of the liver as a primary affection.

Dr. JOHN C. PETERS read a memoir of the late Dr. Alfred C. Post, reviewing particularly the work done in the Pathological Society during his presidency in 1861.

CARCINOMATOUS STRICTURE OF THE RECTUM, WITH GREAT DISTENTION OF THE GUT.

Dr. FERGUSON presented the rectum and intestines of a man who died aged 54 years. He was admitted to the service of Dr. Peabody, in New York Hospital, December 1, 1885, with a history of piles, bloody passages, and diarrhœa. His father had died of cancer of the rectum. In February there was very marked tympanites, frequent vomiting, and great pain. Carcinomatous stricture of the rectum at two points was recognized, and at the autopsy the opening was found with difficulty, and was not more than one-eighth of an inch in diameter. The intestines were greatly distended. The left lobe of the liver was filled with carcinomatous material of the encephaloid rather than the scirrhous variety.

CARCINOMA OF THE STOMACH, LIVER, AND PERITONEUM.

Dr. FERGUSON also presented the stomach, liver, and intestines of a woman who died aged 35. The case was interesting taken in connection with the history. The patient was admitted to the New York Hospital, service of Dr. Peabody, February 20, 1886. She considered herself well five weeks previous to admission, which was one week after the birth of her last child. Her appetite then became poor; she had pains in the stomach, which were relieved by the administration of opium only; she occasionally vomited. It was not until the 10th of February that she felt obliged to keep her bed. At this time she had a chill, followed by fever and sweating. Since the 10th of February her abdomen increased rapidly in size, she had dyspnœa, diarrhœa, the movements being preceded by pain, which disappeared after the passage. The liver was enlarged, nodular; there were present ascites, slight anasarca, and cachexia. Dr. Ferguson made a diagnosis of cancer of the liver, and got himself into difficulty by unguardedly announcing the nature of the trouble to the patient's friends, for she had been seen by three other physicians who had made different diagnoses. Death took place on the 21st of February, and the autopsy revealed a very thick cancerous mass in the stomach, involving all of the coats. The disease doubtless had started from this point. The omentum and entire peritoneum were infiltrated with nodules; likewise the diaphragm. The liver was enlarged, and studded with nodules of large and small size. An interesting point was the fact that the very rapid development of ascites had been attributed during life to narrowing of the portal vein from surrounding carcinomatous tissue. The autopsy revealed such narrowing. The spleen had also been recognized as small, and this was explained at the autopsy by constriction of the splenic artery from the presence of carcinomatous tissue. Dr. Ferguson said that whenever he found cancer involving a mucous membrane he regarded that as the primary seat of the disease. Primary cancer of the omentum was rare.

Dr. CARPENTER had seen one case of supposed primary cancer of the omentum. There was one nodule on the surface of the liver, at the point where the omentum lay in contact with the liver, and the hepatic nodule was considered secondary, due to contact.

REVIEWS AND BOOK NOTICES.

A DOCTOR'S EXPERIENCES IN THREE CONTINENTS. By EDWARD WARREN, M.D., C.M., LL.D., Bey by Khedival Firman, etc. In a Series of Letters addressed to John Morris, M.D., of Baltimore, Maryland. Baltimore, Cushings & Bailey, 1885.

Autobiography owes its peculiar charm to the natural interest which we feel when the subject, himself prominent, has held intimate relations with the leading characters of his time, or has played an important *rôle* in the working out of great social or moral problems, or has been subject to peculiar and extraordinary vicissi-

tudes of fortune. In the life of Dr. Warren these elements are combined in a remarkable manner. A republican, he graces a court and saves the life of a queen; an American soldier, he is decorated for services by the Khedive; a physician and a man of peaceful inclinations, he becomes a warrior by force of circumstances, and an enthusiastic defender of the code. The style of the narrative is varied and somewhat discursive, but nevertheless entertaining and extremely interesting. At the wane of a life full of experience acquired under the most diverse circumstances and in different parts of the globe, his philosophy finds appropriate expression in the following sentence (page 30):

"I have travelled far, and seen much, and suffered greatly, but the longer I live and the more comprehensive my experience becomes, the greater is my faith in religion, and the stronger is my conviction of its necessity alike for the happiness of the individual, the stability of society, and the welfare of the world."

While a student of medicine in Philadelphia, Dr. Warren conceived the idea of hypodermic medication, and even carried it into practice.

DISEASES OF THE LUNGS (OF A SPECIFIC, NOT TUBERCULOUS, NATURE): ACUTE BRONCHITIS, INFECTIOUS PNEUMONIA, GANGRENE, SYPHILIS, CANCER, AND HYDATID OF THE LUNGS. By PROFESSOR GERMAIN SÉE. Translated by E. P. HURD, M.D. With Appendices by GEORGE M. STERNBERG, M.D., and PROFESSOR DUJARDIN-BEAUMETZ, M.D.

The November issue of Wood's Medical Library is devoted to the consideration of a group of diseases which are at present attracting much attention. Professor Sée is known as an earnest advocate of the parasitic doctrine of the etiology of many acute diseases, and it is upon microbiotic etiology that he has laid the foundations of his nosology, and to some extent the same data are applied to the question of treatment. We feel certain that this work should be read particularly by the opponents of the recent doctrines in pathology, in order to keep themselves informed of the present status of the discussion. No intelligent physician can read its pages without interest or fail to receive information from them.

EPILEPSY AND OTHER CHRONIC CONVULSIVE DISEASES: THEIR CAUSES, SYMPTOMS, AND TREATMENT. By W. R. GOWERS, M.D.

DIAGNOSIS OF DISEASES OF THE BRAIN AND OF THE SPINAL CORD. By W. R. GOWERS, M.D.

These two volumes form the September and December issues of Wood's Medical Library, and are a fair sample of the quality of the Library for the past year. By their successful efforts in popularizing among the American medical profession the productions of standard authors, the publishers have contributed materially to the important work of elevating the standard of medical thought and practice in this country. Gowers on Epilepsy needs no extended notice: it has been before the profession for some time, and has been highly esteemed. Gowers on Diseases of the Brain and Spinal Cord is a new work: it is in the form of lectures, very much as they were delivered at the University College Hospital, and has been published in response to the request of many readers of his former work on Diseases of the Spinal Cord. The familiarity of the lecturer with his subject, and the freedom of style permitted by the lecture-form, render his last work one that will be as well received by the profession as the first. The text is illustrated by numerous diagrams. The greater portion of the book—eighteen lectures—is devoted to cerebral affections, the remaining six lectures being occupied with diseases of the spinal cord: in each occasional references to clinical cases add interest to the discussion.

NEW REMEDIES AND CLINICAL NOTES.

HYDRASTIS CANADENSIS IN METRORRHAGIA.—Dr. A. J. Akuloff, of Wilna, details (*Proceedings of the Wilna Medical Society*, No. 9, 1885, p. 6) the case of a married woman, aged 42, who had been for nine years suffering from profuse flooding occurring every two weeks. Treatment by intra-uterine injections of perchloride of iron and subcutaneous injections of ergotin had wrought no improvement. On examination, there were found dilatation of the cervical canal, enlargement, hardness, and impaired mobility of the womb, considerable distention of the cervical veins, and numerous easily-bleeding erosions scattered over the whole mucous membrane of the cervix. Fluid extract of hydrastis Canadensis, in doses of twenty minims three times daily, was given for about three months. The first catamenia were yet profuse, lasting about ten days, but subsequently they returned only once a month and lasted each time three days, the amount of blood being moderate. A decrease in the bulk of the womb was also noted at the end of three months' treatment.—*London Medical Record.*

URETHAN AS A HYPNOTIC IN CARDIAC DISEASE.—In the *Lancet*, December, 1885, p. 1167, Dr. Robert Saundby writes that he has treated two cases of cardiac insomnia by two-grain doses of urethan, given at bedtime, in solution in water. One patient suffered from aortic and mitral incompetence, with congestion of the lungs, hæmoptysis, pleural effusion, and œdema of the legs, Urethan has for its formula $NH_2CO_2C_2H_5$,

and is described by Kobert. It was first used medically by Von Jaksch, of Vienna. He experimented with it on animals, and found that no toxic effect occurred even when the drug was administered in the proportion of .5 gramme for each kilogramme of the animal's weight.—*London Medical Record.*

CHLOROPEPTONATE OF IRON.—The *Bulletin Général de Thérapeutique* describes Dr. Jaillet's experiments which have led him to prescribe and recommend the use of chloropeptonate of iron. He injected ten grammes of this salt into the veins of a bitch weighing twenty-one pounds. There was neither coagulation nor embolus. Two hours after the injection was made, sixty cubic centimetres of blood were removed from the femoral artery, half of which was allowed to coagulate in order to analyze the serum; the other half was defibrinated. The dog remained alive more than two months after the experiment. The serum contained chloropeptonate of iron. The blood-corpuscles, examined under the microscope, were found to be perfectly normal. Dr. Jaillet has experimentally ascertained, by hypodermic, rectal, and intravenous injection, and by ingestion, that chloropeptonate of iron enters the circulatory system and is absorbed into the blood. Chloropeptonate of iron is a chemical combination of peptone and iron perchloride, which does not undergo any change from the gastric juice, nor from the alkalies of the blood. It is absorbed and assimilated just as it is administered, and produces, in consequence, a higher temperature, increased disassimilation, and more copious excretions. The appetite increases, and the patient grows thinner, but the physiological qualities of the blood improve.—*British Medical Journal.*

MISCELLANY.

TO THE DELEGATES TO THE AMERICAN MEDICAL ASSOCIATION.—The rates given to the Delegates to the American Medical Association meeting, May 4, in St. Louis, have been fixed by the different Railroad Committees of the country at one and one-third fares for the round trip. Delegates must pay full fare coming, and will receive, on application, from the agent at the starting-point a certificate, which, when signed by the Chairman of the Local Committee of Arrangements, will entitle them to the reduced return-rate.

No reduced return-ticket will be issued unless the purchaser can show a certificate issued by the agent from whom he purchased the going ticket, and signed by the Chairman of the Committee of Arrangements.

LE GRAND ATWOOD,
Chairman Committee of Arrangements.

THE CARTWRIGHT LECTURES of the Alumni Association of the College of Physicians and Surgeons of New York (fifth course) will be delivered by William Osler, M.D., Professor of Clinical Medicine at the University of Pennsylvania (Gulstonian Lecturer, London, 1885), at the hall of the Young Men's Christian Association, corner of Twenty-third Street and Fourth Avenue, at 8 P.M., as follows: General subject: Certain Problems in the Physiology of the Blood.

Tuesday, March 23: The so-called Third Corpuscle; the Blood-plate of Bizzozero: the Hæmatoblast of Hayem.

Saturday, March 27: Degeneration and Regeneration of the Corpuscles.

Tuesday, March 30: The Relation of the Corpuscles to the Process of Coagulation.

DRAINING, SEWERING, AND PAVING OF NEW ORLEANS.—On the 1st instant, representatives from the Board of Health, the New Orleans Auxiliary Sanitary Association, the New Orleans Medical and Surgical Association, the Orleans Parish Medical Society, the Chamber of Commerce, and other city organizations, met at New Orleans and instituted a Board of Public Works. The new Association is intended to be limited to fifty members free from political affiliations: it is called the New Orleans Draining and Paving Association, and is designed to be a permanent organization. The advantages that will accrue to New Orleans from the successful accomplishment of the objects of the organization will be beyond calculation, as the necessity of grading and paving that city is evident from a commercial as well as from a sanitary stand-point; and it is hoped that their application to the owners of property for funds to carry on the work will be promptly granted.

THE NEUROLOGICAL REVIEW.—It is with pleasure that we note that Professor J. S. Jewell, of Chicago, has so nearly regained his health that he has issued the prospectus of a new monthly journal to be devoted to diseases of the nervous system, under the title of "The Neurological Review." The contents will consist of original and selected articles, editorials, reviews, and a bibliography of current publications in this department of medicine. The former readers of the *Journal of Nervous and Mental Disease* will be glad to know that Dr. H. M. Bannister will be associated editorially with Dr. Jewell in the new enterprise, as he was in the older journal.

THE MEDICAL SOCIETY OF THE STATE OF TENNESSEE will hold its Fifty-third Annual Meeting in Memphis, commencing Tuesday, April 6, 1886. Thomas L. Madden, M.D., of Nashville, is President, and C. C. Fite, M.D., of Knoxville, Secretary of the Society. A very successful meeting is expected.

Dr. G. BETTON MASSEY has removed to 1706 Walnut Street.

NOTES AND QUERIES.

OBITUARY.

AUSTIN FLINT, M.D., LL.D.—Professor Austin Flint died of cerebral apoplexy, at his home in New York City, on the 13th instant. He had attended a meeting of the Faculty of Bellevue Medical College on the preceding afternoon, and appeared, on his return to his home, to be in his usual health, though fatigued by the duties of the day. At midnight, a few moments after he had gone to his room, a cry was heard, and he was found lying across his bed unconscious, and in this condition he remained until his death, which occurred at 2 P.M. on Saturday.

Professor Flint came of a medical line, his father, grandfather, and great-grandfather having been physicians of distinction in their day. He was born at Petersham, Massachusetts, on October 20, 1812. His collegiate studies at Amherst and Harvard were followed by a full course in the Medical Department of Harvard, from which he was graduated in 1833. From the beginning of his career he made himself known both by his success as a practitioner and by his contributions to medical periodicals. The first three years of his professional life were passed at Northampton and Boston. In 1836 he went to Buffalo, where he remained until 1844, his prominence at that time securing him a call to the chair of Institutes and Practice of Medicine in the Rush Medical College, Chicago. At the close of the year he returned to Buffalo, where he established the *Buffalo Medical Journal* in 1846, which he conducted for ten years. Meanwhile he was increasing his usefulness in various directions. He was one of the three founders, in 1847, of the Buffalo Medical College, in which until 1852 he occupied the chair of Practice of Medicine and Clinical Medicine Then he went to the University of Louisville, where he remained as Professor of Theory and Practice until 1856, when he went back to Buffalo as Professor of Pathology and Clinical Medicine. While still holding a residence at Buffalo, he passed the winters of 1858, 1859, and 1860 in New Orleans, where he was Professor of Clinical Medicine in the Medical School, and was also Visiting Physician to the Charity Hospital. He changed his home towards the close of this period to New York, which he made his permanent residence afterwards. In 1861 he became one of the physicians to Bellevue Hospital and was appointed to two professorships,—of the Principles and Practice of Medicine and Clinical Medicine in Bellevue Hospital Medical College, and of Pathology and Practical Medicine in the Long Island College Hospital. He remained with the Bellevue faculty, but his duties forced him to sever his connection with the Brooklyn College in 1868. As an author and successful teacher, Dr. Flint did much for the profession. His "Treatise upon the Principles and Practice of Medicine," published in 1866, has gone through five editions. He also published a systematic work on Clinical Medicine, which appeared in 1879.

Among his other contributions to medical science which are noteworthy were his "Reports upon Continued Fever, Chronic Pleurisy, and Dysentery;" his "Practical Treatise upon the Pathology, Diagnosis, and Treatment of Diseases of the Heart;" his celebrated essays on "Variation in Pitch and Percussion of Respiratory Sounds," and "A Study of Heart-Sounds in Health and Disease," which received prizes at the meetings of the American Medical Association in 1852 and 1859. His "Manual of Auscultation and Percussion" was published in 1876, and he only recently prepared a fourth edition. He also wrote "A Practical Treatise on the Diagnosis and Treatment of Diseases of the Heart," "A Practical Treatise on the Physical Exploration of the Chest" (of each of which a second edition was soon called for), a series of clinical lectures on "Phthisis, its Morbid Anatomy, Etiology, etc.," and "The Physical Exploration of the Lungs by Means of Auscultation and Percussion;" and medical essays from his pen appeared in quick succession.

Dr. Flint always filled a prominent position in the profession, and was elected President of the New York Academy of Medicine in 1872, and in 1876 was a delegate to the International Medical Congress held in Philadelphia. He was active in the organization and was warmly interested in the welfare of the American Medical Association, and in 1883 was elected to its highest office, and at the meeting at Washington, D.C., he accordingly officiated as President of the Association. It was in consequence of a recommendation contained in his address that an invitation was extended to the International Medical Congress to hold its next meeting in this country in 1887. Dr. Flint received the well-merited compliment of being nominated by both the first and the subsequent committee of arrangements for the Presidency of the Congress.

Few American physicians have been so widely known, and very few have been able to exert so extensive an influence upon the profession, or employed great powers so decidedly for the welfare of their fellows. Of him it might be said, "He served his own generation, and has fallen asleep."

A SURGICAL HISTORY OF THE WAR OF THE REBELLION.

FORT BIDWELL, CALIFORNIA,
February 14, 1886.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

I am engaged in the preparation of a "Compendium of the Surgical History of the War of the Rebellion," designed as a hand-book for military surgeons, and desire to consider at some length "injuries of the blood-vessels," the remote effects of gunshot-wounds in general, and the "ultimate results" as regards the functional utility of the limbs treated by conservation and excision in particular. Inasmuch as many of the survivors have doubtless come under professional observation at this late date, it is hoped that the observers will render a service to military surgery and to me personally by communicating unpublished data, which will be gratefully acknowledged.

Respectfully,
GEORGE M. KOBER,
Acting Assistant-Surgeon U.S. Army.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM FEBRUARY 28, 1886, *TO MARCH* 13, 1886.

MAJOR WILLIAM S. TREMAINE, SURGEON.—Leave of absence extended six months on surgeon's certificate of disability. S. O. 50, A. G. O., March 2, 1886.

MAJOR J. W. WILLIAMS, SURGEON.—Ordered for duty as post-surgeon, Vancouver Barracks, Washington Territory.

CAPTAIN C. E. MUNN, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort Cœur d'Alene, Indian Territory.

CAPTAIN M. W. WOOD, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort Walla Walla, Washington Territory.
S. O. 31, Department of the Columbia, February 20, 1886.

MAJOR HENRY MCELDERRY, SURGEON.—Leave of absence extended one month. S. O. 49, A. G. O., March 1, 1886.

CAPTAIN WILLIAM G. SPENCER, ASSISTANT-SURGEON.—Ordered for duty at Fort Yates, Dakota Territory. S. O. 17, Department of Dakota, February 23, 1886.

To be Assistant-Surgeons, with the rank of Captain, after five years' service, in accordance with the act of June 23, 1874:

ASSISTANT-SURGEON WILLIAM H. ARTHUR, February 18, 1886.

ASSISTANT-SURGEON GEORGE E. BUSHNELL, February 18, 1886.

ASSISTANT-SURGEON HENRY P. BIRMINGHAM, February 18, 1886.

ASSISTANT-SURGEON MARLBOROUGH C. WYETH, February 18, 1886.
Circular, A. G. O., March 1, 1886.

R. L. ROBERTSON, FIRST-LIEUTENANT AND ASSISTANT-SURGEON.—Granted leave of absence for one month. (Fort Ringgold, Texas.) S. O. 29, Department of Texas, March 8, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM FEBRUARY 28, 1886, *TO MARCH* 13, 1886.

SURGEON GEORGE W. WOODS.—Ordered to Navy-Yard, Mare Island, to relieve Surgeon W. K. Schofield, April 1, 1886.

SURGEON W. K. SCHOFIELD.—Detached from Navy-Yard Mare Island, and wait orders.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, APRIL 3, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON STUPOROUS MELANCHOLIA, AND ON MYELITIS COMPLICATED WITH HYSTERIA.

Delivered at the Philadelphia Hospital

BY CHARLES K. MILLS, M.D.,

Neurologist to the Philadelphia Hospital, and Professor of Diseases of the Mind and Nervous System in the Philadelphia Polyclinic.

Reported by WILLIAM H. MORRISON, M.D.

STUPOROUS MELANCHOLIA.

GENTLEMEN,—This patient presents a rather curious form of mental trouble. He was for some time an inmate of the insane department, but has recently been removed to the wards for nervous diseases. The following history has been obtained. J. M., aged 25 years, born in Philadelphia, single, type-finisher by occupation. Ten years ago he had an attack of lead-colic, and continued sick four weeks. He had marked wrist-drop. He has been a moderate drinker. The first symptoms of insanity appeared five years ago. He suspected his sister of trying to poison him. He heard voices round about him, and persisted in saying that the men where he worked were endeavoring to have him discharged. He was also afraid of being injured, and thought that persons were pursuing his friends. This condition lasted for about six weeks, and was followed by a state of stupor. For a few days before the appearance of the stupor he became very childish in his actions. The condition of stupor was at times replaced by a period of excitation. During his stay in the insane department, a period of two years, he continued quiet and more or less stupid.

Since he has been in the ward he has exhibited this simple, uninterested condition. He sits all day long as he is now, with his head bowed down, never saying anything, not answering when spoken to, and not moving unless moved by others. He takes food as it is put into his mouth. He pays little or no attention to his bowels and bladder.

The study of such cases is important, because you may at any time be presented with a case of this kind for diagnosis. Just as the diagnosis of insensibility is of the utmost importance outside of the practice of psychiatry, so in cases of insanity it is often of great importance to diagnosticate the cause and nature of stupor or mutism. A patient may be in a condition similar to that of the man before you, from one of several conditions.

It may result from hysteria. If this patient were a woman, one would be apt to suspect something of this kind. This is not a case of that sort. Not simply because the patient is a man, for grave hysteria may exist in the male subject. If this patient were suffering from hysteria, you would not have the appearance which is here presented. Such a patient may sit in a chair, obstinately refusing to open the mouth, but at the same time he will not have the physiognomy, not the gait nor the stoop, nor the peculiar appearance, presented by this man. You would have also a history of associated hysterical manifestations.

In two forms of insanity, or perhaps two varieties of one form of insanity, a stuporous condition is the prominent feature. These are variously designated, according to the method of classification that is adopted. Some of the more recent authorities include these two forms under the head of stuporous insanity, describing a *melancholic* form and one dependent upon loss of mental power, or *dementia.* The old terms were *melancholia attonita* and *acute dementia.* This latter term is not a good one, because it can be applied to some other forms of insanity. The best terms are probably *stuporous melancholia* and *stuporous dementia.*

Supposing this man to be suffering from one or other of these affections, let us see if we can distinguish between melancholia with stupor and stuporous dementia. To the ordinary observer, the features of these two forms of mental trouble are identical. You have just what is here present. These patients are immobile to a large extent, and in some cases absolutely so. If they are stood up against a wall they will remain there until they drop from pure physical exhaustion. Then you have the expression, and the bowed appearance, but this you may also have in ordinary forms of trouble, as in secondary dementia; and you have this refusal to take food. In the diagnosis you are compelled to rely almost

exclusively upon the history of the case and the physiognomy.

In the present instance the history would point to some form of delusional melancholia and secondary stupor, rather than to stuporous dementia. Stuporous dementia comes on in a person in good health with no past history of mental trouble. The patient may, however, be exhausted, as in the case of one of my patients, a woman who had for weeks watched over a member of the family who was sick. She suddenly became speechless, refused to attend to herself in any way, sat in one corner, refused to take food, and was in much the condition of this man. It was utterly impossible to do anything in the way of talking and reasoning with her. She was taken in hand, supposing that it was a case where there had been true mental exhaustion. She was fed artificially (and this must be done in all these cases where the patients will not take food by the mouth); she was also given tonics; and in a few weeks she made a good recovery.

Sometimes it is necessary to wait until the patient comes out of the condition before making a positive diagnosis. In stuporous melancholia, when the patients recover, sometimes they will tell you, or you will learn in some way, that they have been all this time under the influence of some terrible delusion: they have been impressed with some terrible idea,—fearing that if they moved they would be stricken down, that a sword was hanging over their head,—afraid of the vengeance of the Almighty for something that they had done.

In a case of stuporous dementia, it is simply an overwhelming of the entire mental organization for the time being. I think that in this case we can exclude ordinary stuporous dementia.

This man has a history of delusional insanity with melancholia preceding the present condition of stupor. He got into a condition of violent mania, and then passed into this stuporous condition. I should say that this is either a case of secondary dementia subsequent to insanity of a delusional form, or a true case of stuporous melancholia. Possibly we can determine whether it is one or the other of these two. If it be secondary dementia the man will not get better, for this means that such degenerative changes have taken place that recovery cannot be hoped for. If it be a case of stuporous melancholia, the patient may get better even after the condition has lasted for months or years.

I now will have the patient stand up, and you notice another symptom. In cases of melancholia, a cataleptoid condition will often be observed. In a disorder known as *katotonia* there is a mixture of catalepsy with true mental manifestations. Often in cases of melancholia you may see a tendency to waxy immobility and to a cataleptoid condition. You notice that the patient gets into a certain position which he keeps more or less permanently. While the arms cannot be moulded as in some cases, yet when placed in a certain position they tend to remain there. I believe this case belongs to the general class of melancholia with stupor.

Taking up the question of treatment, in the first place the patient is to be fed. There is no special line of treatment. It is largely an experimental matter, so far as therapeutics is concerned. It is largely a question of training and drawing him out by mental and moral measures and by impressing your own personality upon him. Medicines of a building character, such as quinine, arsenic, and strychnine, are indicated. Electricity may be employed for the improvement of his physical condition, and efforts made to rouse his attention to the fact that there is another world than that in which he is living. He should also be trained to make certain movements, such as holding the head in different positions.

I have now under treatment, outside of the hospital, a man who some years ago had melancholia with suicidal tendencies and with certain delusions. After the appearance of the melancholia he began to have attacks of mania, and he was placed in an insane hospital and kept there for some time. He finally settled down into a condition in which he neither spoke nor did anything except as he was forced. Then he began to keep his eyes closed; he sat or walked with both eyes shut, and responded to nothing that was said to him. Food was put into his mouth, and he had to be taken care of as a machine. He would attend to his excretions, but had to be compelled to do so. The practical point about this case is that this man was taken hold of, and in a few months was considerably improved by a process of training. He now keeps his eyes open during a large part of the day, and instead

of being fed he feeds himself. He can be persuaded into conversation, and will take exercise. The object has been to re-educate the brain and to call out what brain-power is left. A lady has been employed to come regularly to read to him and engage him in conversation. At first she took ordinary text-books, of a character that required very little mental strain. I do not know that he will entirely recover, but it is not impossible that he may be made a useful member of society. The patient before us is of a different type; he has had little education, so that this method is not entirely applicable to his case; but, so far as it can be done, some such plan should be carried out.

MYELITIS COMPLICATED WITH HYSTERIA.

We have here another case the diagnosis of which is obscure. The history is as follows. The patient, a young woman, has had the ordinary diseases of childhood. Seven years ago, while walking, she slipped, but did not fall. She immediately felt severe pain in the back and felt something like a band surrounding the thorax. She slowly got better, but the pain still continued, so that she was unable to stand, and could not ride in the street-cars. The pain was increased by wearing corsets. Two months ago, she first noticed that on putting the foot forward from her it would spring up. In a short time this became very marked.

The patellar reflex is much exaggerated. The legs feel cold and numb, and she is unable to move them. They sometimes draw up involuntarily, and at times with sufficient force to throw her out of bed.

I have not before examined the patient. I have learned that she has been up and down several times. With this last attack she has been in bed seven months.

It is very important to make out definitely whether this woman is suffering from organic or functional trouble. The mere fact that she has been in bed seven months means nothing. She could be on her back seven years and yet the trouble be merely functional. With the definite history of traumatism many would be inclined to say that the woman had a hemorrhage or an injury of the bone. If I read the history aright, that is not my opinion. She slipped in the yard of her house, but after the injury she was able to walk into the house. I have carefully examined the back, and two of my colleagues have done the same, without finding any evidence of fracture. Movement and jarring of the spinal column reveal no evidence of inflammatory disease of the vertebræ, or of the periosteum or membranes. There is no tenderness on pressure. I would say that, so far as this examination goes, there is no evidence of disease of the bone.

The limbs have not wasted. She has control over the muscles, but, apparently, not so much over those of the right as over those of the left leg. Paralysis is not complete, but she has some paresis, which is most marked on the right side. The patellar reflex is, if anything, exaggerated. There is no ankle-clonus on the left side, while there is slight ankle-clonus on the right side. A hurried test with the battery shows that there are some groups of muscles which do not respond well.

She states that for three weeks she had no control over the bladder or bowels. The limbs at one time were much contractured.

I believe this to be a case in which there is a large hysterical element. Two things point to some organic trouble. One is the fact that farado-contractility is impaired. The other is that she apparently had some impairment of control over the bladder and rectum, which persisted for some length of time. Three classes of cases presenting hysterical or similar manifestations are met with in practice. One is purely and absolutely hysterical, coming on with a history of injury; another is pure organic disease. In the third class you may have some real lesion with also a certain amount of hysteria. The fact that this woman lost control over the sphincter muscles and has some impairment of electro-contractility (although we have not yet determined the reactions of degeneration) would indicate some myelitic trouble. Probably a portion only of the trouble is hysterical. You will recollect that at a previous lecture I showed you a woman who was absolutely paralyzed and had the reactions of degeneration, and who was in a much worse condition than this patient; yet she has since recovered. The symptoms which would show the existence of myelitis are the presence of the reactions of degeneration, impaired and particularly abolished patellar reflex, involvement of the bladder, and a sensation of a cord around the waist. If all these were pres-

ent, it would be absolute proof of the existence of myelitis. The difficulty in diagnosis comes in when you have but one or two of these symptoms. This patient has impaired electrical reaction, she has had bladder-trouble, but the patellar reflex is not impaired. This is quite common in hysterical cases. Whether or not there is a specific history, I do not know.

The treatment consists in keeping the patient at rest during the acute stage, the use of alternate hot and cold applications to the spine, the administration of ergot in considerable doses, and iodide and bromide of potassium. After a time, when only the symptoms of loss of power remain, electricity and movements are to be employed.

ORIGINAL COMMUNICATIONS.

RECENT WORK ON MEDICAL CHEMISTRY.

BY WILLIAM H. GREENE, M.D.

NORMAL ELIMINATION OF UREA.

FROM the results of analysis of his own urine during many days of uniform alimentation, Carl Genth concludes that the quantity of urea daily excreted is by no means constant, but fluctuates during a shorter or longer period between two extremes. The periods covered by the fluctuations are more or less uniform, extending over from four to eight days. The beginning of a period is characterized by a notable increase, and the quantity then gradually diminishes until the last day, when there is frequently a slight increase, followed on the succeeding day by the larger excretion marking the beginning of a new period. As an example, the daily excretions from the eighteenth to the twenty-second day of the experiment were 35.49, 36.36, 31.56, 30.25, 31.68 grammes; from the twenty-third to the twenty-seventh day the quantities were 40.24, 33.78, 30.73, 29.28, 29.92 grammes. The periods are more marked and extend over a longer time when the ingestion of water is unstinted; if the supply of water is limited, the periods become shorter and less characteristic. No such periodicity can be detected in the elimination of the other constituents of the urine.

If these results be trustworthy, as there is every reason to believe them, they illustrate well the uselessness of most of the clinical estimations of urea.

PHOSPHATES IN URINE.

A. Ott has published a series of analyses showing the relative quantities of acid and normal phosphates in the urine. The results showed that the mean ratio of phosphoric anhydride existing as normal phosphate to that existing as acid phosphate was, for the evening urine, 91 : 100; for the night urine, 56 : 100; and for the morning urine, 58 : 100. The ratio for the urine of twenty-four hours was 69 : 100. The urine was collected daily at 10 P.M., 8 A.M., and 2 P.M., and a meal was taken after each collection. Breakfast consisted of coffee and bread; dinner and supper, of meat and vegetables.

The urine holds in solution a larger proportion of phosphates than would be dissolved by similar quantities of pure water, and this fact is accounted for by the presence of other salts, particularly potassium sulphate and sodium chloride, which increase the coefficients of solubility of both acid and normal phosphates.

A METHOD FOR THE ESTIMATION OF CHLORINE IN URINE, MILK, AND SEROUS LIQUIDS.

Carl Arnold recommends for the estimation of chlorides in all animal liquids that ten cubic centimetres of the liquid be mixed with twenty or thirty drops of nitric acid of specific gravity 1.185, and then with two cubic centimetres of ammonium-iron alum and ten or fifteen drops of a ten-per-cent. solution of potassium permanganate. After the dark color which is developed has disappeared,—and its disappearance may be hastened by warming the mixture,—the solution may be at once titered with a deci-normal silver-nitrate solution. Fresh fluids which contain no sulphur compounds may be treated without the addition of potassium permanganate. With very albuminous fluids, such as serum, it is better to dilute the liquid to one hundred cubic centimetres after the precipitation of the albumen by nitric acid, and the titration is made on a measured portion of the filtered liquid. The chlorides in milk may be determined without filtration.

A METHOD FOR THE ESTIMATION OF URIC ACID.

E. Ludwig estimates uric acid by treating one hundred cubic centimetres of urine

with a mixture of magnesium sulphate and ammonia, and a solution of ammonio-silver nitrate; the precipitate contains magnesium-silver urate and magnesium-ammonium phosphate. It is collected and digested with a solution of potassium sulphide; after standing, the mixture is filtered, and the filtrate, which contains potassium urate, is concentrated by evaporation. The uric acid is precipitated by hydrochloric acid, collected on a glass-wool filter, washed with carbon disulphide to remove adhering sulphur, dried, and weighed. If the urine contain albumen, it must be boiled with a solution of common salt and acetic acid, and the filtered liquid is treated as before indicated.

THE DETECTION OF ACETONE IN PATHOLOGICAL LIQUIDS.

The best method for the separation of acetone from urine or other liquid is by distillation from the whole quantity of liquid; but this process requires a somewhat troublesome manipulation, and frequently the quantity of liquid is so small that the distillation is difficult. After showing that the ordinary tests (depending on the production of a rose-red color with sulphuric acid, and a brown with ferric chloride) are untrustworthy, P. Chautard recommends the use of rosaniline salts, which are changed from red to violet by aldehydes and acids; the violet color is stable in presence of sulphurous acid, which rapidly bleaches rosaniline salts. The reaction is most distinct when a solution of fuchsine decolorized by sulphurous acid is employed.

The reagent is made by dissolving twenty-five centigrammes of fuchsine in half a litre of water, and passing sulphurous acid gas through the solution until the red color is replaced by a pale yellow, which is not changed by an excess of sulphurous acid. The liquid so obtained may be preserved indefinitely in well-stoppered bottles.

For the detection of acetone in urine, a few drops—at most one cubic centimetre—of the reagent are added to fifteen or twenty cubic centimetres of the urine. A violet color is produced if acetone be present. The intensity of the color is proportional to the concentration of the solution, and not to the quantity of acetone present. It does not always appear immediately, and in dilute solutions may become apparent only after four or five minutes. One-tenth of one per cent. of acetone must be present in order to produce a decided color. If the proportion of acetone be very small, or if the yellow color of the urine be sufficiently intense to mask a feeble violet, two hundred cubic centimetres of the urine should be distilled slowly until fifteen cubic centimetres have been collected. On this portion the test is made, and if no result is obtained the urine must contain less than one-hundredth per cent. of acetone, a quantity not isolable by fractional distillation.

Chautard also states that the fuchsin reagent will always detect traces of aldehyde, acetone, or similar reducing compounds in commercial alcohol; pure ethyl-alcohol produces no violet color with rosaniline.

POISONOUS ALKALOIDS IN OLD FLOUR.

Balland has found that flour which has been kept for some time in sacks contains traces of alkaloids, and the older the flour the greater the quantity of the alkaloids. After extracting the flour with ether and evaporating the solution so obtained, the fatty residue is acid, and has an unpleasant penetrating odor and an acrid taste. Alkaloids may be detected in the aqueous extract of this residue by means of the usual reagents. Flour from twelve to eighteen months old contains appreciable quantities of alkaloids, and the extract proved fatal in several hours to sparrows to which it was administered, while extracts from fresh flour produced no such effects.

POST-MORTEM TRANSFUSION OF ARSENIC.

It has been shown that arsenic injected into the stomach after death can pass to the liver and neighboring viscera, but it has been doubted that the processes of transfusion could carry arsenic so injected to the brain, and in general it has been assumed that the hydrogen sulphide produced during decomposition converts arsenic into insoluble sulphide, thus preventing transfusion.

F. S. Sutton has made injections of three grains of arsenious oxide into the stomach and rectum of dogs that had been killed by chloroform twenty-four hours previously. After burial during a time varying from three to one hundred

and two days, arsenic could be detected in the liver, kidneys, and brain, and the longer the lapse of time the more arsenic was present in the brain. Scolosuboff's statement that arsenic is deposited in the brain only during life, and that the presence of arsenic in the brain is conclusive evidence that it was absorbed during life, is consequently untrustworthy.

DETECTION OF STRYCHNINE.

P. C. Plugge has published results of investigations on the separation and detection of strychnine. The general conclusions are: 1, that the most delicate reagent for strychninic or igasuric acid is sulphuric acid and ceroso-ceric oxide. (This is known as Sonnenschein's reaction, and results in the production of a blue color like that produced by strychnine with potassium dichromate and sulphuric acid, but the blue color of the cerium-reaction lasts for a day or longer and then changes to cherry-red.) The test may be depended on for as small a quantity as .01 milligramme. 2. The same reagent is the most delicate test for strychnine, and will reveal the presence of .005 milligramme. 3. Chloroform is the best medium for the separation of strychninic and igasuric acid from aqueous liquids. Igasuric acid is not altered during its passage through the organism, and strychnine is eliminated either entirely or in great part without alteration; but the elimination of strychnine is exceedingly slow. Eight days after the ingestion of strychnine traces of the alkaloid may still be detected in the urine. This slow elimination of strychnine is of importance from a medical stand-point, for it indicates that a cumulative poisonous effect might result from the repeated administration of small doses.

THE PHYSIOLOGICAL ACTION OF NEURINE.

A. Moriggia has studied the physiological action of commercial neurine, which is a mixture of trimethylhydroxethyleneammonium hydrate, trimethylvinylammonium, and a little trimethylamine. The poisonous properties are owing principally to the vinyl compound, which is between fifteen and seventeen times as poisonous as that of hydroxethylene, and the author concludes that the toxicological phenomena are of the same order for both compounds, and are similar, especially in the results on frogs, but less marked than those of curare and analogous poisons.

V. Cervello has independently arrived at essentially the same conclusions, excepting that he regards the effects of neurine as combining the action of curare and that of muscarin. This view is supported by the fact that the toxic effects simulating those of muscarine are overcome by atropine, which, even if the dose of neurine be fatal, arrests the glandular hypersecretion and accelerates the retarded heart, but has no power over the curare-like effects.

SWEDISH METHOD OF TESTING FOR ARSENIC.

A. Atterberg publishes the following method for the detection of small quantities of arsenic. A small portion of the substance is treated in a test-tube with very dilute hydrochloric acid, a fragment of zinc, and a little ferrous sulphate. Above the mixture is placed a plug of cotton-wool wet with solution of lead acetate, and in the mouth of the tube two strips of paper are suspended, one moistened with solution of lead acetate, the other with solution of silver nitrate. If the silver-nitrate paper remains unchanged at the end of twelve hours, the substance is said to be free from arsenic; if, on the contrary, this paper becomes brown or black from the reduction of silver by hydrogen arsenide, some of the substance is distilled with hydrochloric acid and ferrous sulphate, and in a portion of the distillate the arsenic is precipitated as sulphide by hydrogen sulphide.

A TEST FOR ADULTERATION OF BUTTER.

A. Wagner proposes for the detection of other fats in butter a method which depends on the fact that pure butter forms an emulsion much more readily than do other fats. About six decigrammes of the butter to be examined are introduced into a flask with twelve cubic centimetres of water and two drops of a two-per-cent. solution of sodium hydrate, and the mixture is well shaken. It is then heated in a water-bath to 37° C. and poured into a separating funnel, the flask being washed out with water at the same temperature and the washings transferred to the funnel. From time to time the liquid is allowed to run out, being replaced by water at 37° until the water below the melted butter is quite clear. The water is then carefully

run out, and, if the butter be pure, the walls of the funnel, after cooling, remain covered with a finely-divided, cheese-like mass; but if foreign fats have been present, oily drops will be apparent, and indeed will be seen during the whole of the operation.

NATURAL LABOR AND ITS MANAGEMENT.

Read before the Philadelphia County Medical Society, January 27, 1886,

BY WILLIAM T. TAYLOR, M.D.

IN September, 1882, I read before this Society a paper on "Abnormal Labor and its Management." I propose now to speak of normal labor and its management,—of the mode which nature adopts in bringing forth the human fœtus, and of the help which at such a time a skilful accoucheur may render.

Natural labor is the vital process by which the fœtus, having reached the full period of utero-gestation, is expelled from its mother's womb,—the child's head and the pelvic cavity being correctly proportioned to each other,—to carry on an independent existence in another sphere. Its duration is usually not over twenty-four hours. It is customary to divide labor into three periods or stages: 1st, the dilatation of the os uteri and rupture of the membranes; 2d, the expulsion of the child; 3d, the delivery of the placenta.

Proceeding first to consider the course of natural parturition, we observe that from a few days to a fortnight before labor there is generally a subsidence of the mother's abdomen, with a tilting forward of the gravid uterus, owing to a relaxed condition of the abdominal walls, which produces more pressure on the bladder and causes frequent micturition, and in some cases an irritable state of the bowels, with griping pains. The breathing is less oppressed, and the patient is more disposed to exertion. The labia may become swollen and softened, and a mucous discharge flows from the vagina. This may be observed for some time before labor, but when it is streaked with blood it is popularly called "a show," and indicates that the os is beginning to dilate and that labor has begun. The patient now complains of pains in the back or abdomen, which occur at long intervals, and which increase in severity as the intervals shorten. The os, which at first was quite high up in the pelvis, gradually sinks lower, and the opening becomes circular and enlarges so that the membranes within can be felt to become tense with each pain. The os dilates more slowly and more painfully in the first labor than in subsequent ones. There is often much sickness of stomach and vomiting, which is considered a sign of an easy labor, for it assists to relax the os uteri. These preliminary or "grinding pains" are very worrying to the woman, who is afraid that she will die, and she often so expresses herself, being filled with gloomy forebodings, particularly in her first labor. This despondency, however, disappears as the labor progresses, for when the os has opened to the size of a half-dollar it will expand more rapidly, and soon the "forcing or expulsive pains" will begin, when she will become calmer, for she feels that her "bearing down" efforts will assist to expel the child. During these pains the membranes will protrude through the os and become tense, receding as the pain subsides. This advance and retreat goes on for some time, until finally with a severe pain the membranes burst and the liquor amnii flows away. Sometimes the membranes do not break until they have dilated the vagina and appeared at the vulva, in which case the labor will soon terminate; when, however, they are very thin and break easily, the progress of the labor will be slow and tedious, constituting what is called a "dry labor." It is best not to rupture them if it can be avoided, for their dilating power is very useful.

With the evacuation of the waters there is generally a cessation of pain for a longer interval than before; but as the second stage now begins, and the head comes down to bear directly against the os, the uterus increases its action, whilst the patient will seize hold of the hands of an attendant and place her feet against the bed-post, or any immovable object, in order to fix the body firmly, so as to bring the abdominal muscles and those of the extremities to her assistance, and will bear down and strain with all her might to expel the child. The veins of her neck will swell, the pulse increase in frequency, and she will be thrown into a profuse perspiration. Now the pains become stronger and more decided, and during the intervals she often falls into a sleep, to regain her

strength for renewed efforts on awaking. Her outcry is different from what it was in the first stage, and an experienced accoucheur can generally detect this stage of labor by the voice of the patient, which has been called the "parturient grunt."

The head slowly advances with each pain, and then recedes slightly during the interval, but still making progress onward,—being somewhat compressed and moulded, if large,—until it sinks gradually into the cavity and at last reaches the floor of the pelvis, when the face will turn into the hollow of the sacrum to bring the vertex under the arch of the pubis.

The pressure against the sacral and sciatic nerves will cause severe pains, extending down the extremities and cramping the calves of the legs and soles of the feet, which can be relieved somewhat by friction. The pressure against the rectum will evacuate the bowels if they are not already empty, and the patient will often insist on getting up to have a stool. Now there is a bulging of the perineum, which subsides as the pain goes off, to be repeated again and again, until the head, by gradually and slowly stretching the parts, at last appears at the vulva, when, with a strong effort and a scream from the woman, it escapes from the maternal parts.

The relief to the patient is so great at this time that she often expresses herself as coming from agony to bliss. A rest for a time ensues, and the uterus resumes its labor to expel the body, and when this is accomplished the second stage is ended.

Within a few minutes or at most a half-hour the uterus will again begin to contract, so as to detach the placenta with its membranes, which will soon be expelled, and this will end the third stage of natural labor.

I have now described the process of labor when nature does all the work: therefore the question may arise, What is the accoucheur to do during all this time? An answer to this question brings me to the *management* of natural or normal labor.

On being engaged to attend a case of labor you should take the earliest opportunity to visit your patient, so as to see her and ascertain her physical condition, her temperament, her habits and modes of life, and also to give her an opportunity of seeing you, so that she may be less embarrassed when labor begins. Then inquire if she has any headache, or any trouble with her bowels or kidneys, or any abdominal pains. If she has no complaint, and is a primipara, advise her to anoint the abdomen two or three times a week with sweet oil, lard, or cosmoline, so as to soften the skin and thus alleviate the pain which often arises from the stretching of the abdominal walls. Tell her to keep the bowels regulated by fruit or laxatives, and to take gentle exercise every day, but not to tire herself by long walks, and to attend to her household duties if they are light. Give her encouragement as to the "coming event," and advise her to summon you whenever she may require your aid.

Should she have headache, give her ten grains of the bromide of potash, with a scruple of the bitartrate of potash, every four hours in a wineglassful of water. If this does not relieve, or if there should be a numbness in the hands, arms, or limbs, the urine must be examined for albumen. When this is found, ten grains of the benzoate of calcium given every two hours will often render the urine normal. But if the headache is not relieved by these remedies, the application of six or eight Swedish leeches to the back of the neck will generally accomplish a cure.

It is advisable in primiparæ to use a lotion of alum and diluted alcohol with glycerin to the nipples, so as to fit them for duty when required.

To stimulate the secretion of milk, a liniment of castor oil and the oil of origanum is highly recommended by Dr. Henry H. Smith as an excellent galactagogue; and if the mammary glands are bathed with it daily during the latter part of pregnancy, they will be well supplied with milk when the child is born. I have used it successfully in several cases.

When summoned to a case of labor, go as soon as possible, for it is only after seeing your patient that you will know if you are needed. Inquire how long she has had pains, how frequently the pains occur, and if there has been any show; whether the bowels have been moved, and if she has urinated. Having ascertained these facts, observe the frequency and character of the pains, and their location. If they are slight, and occur at long intervals, you can leave her for a while; but if the intervals are short, you should have her

placed on her left side at the edge of the bed, and, having washed your hands and anointed the forefinger of the right hand, make a vaginal examination, so as to discover the size of the pelvic cavity, the position of the os uteri, and its state of dilatation,—whether soft and patulous or hard and wire-edged. Should it be in the former condition, you may know that it will dilate easily and quickly; but if in the latter state, you must expect a tedious labor. Note also the condition, shape, and size of the abdominal walls, for at this time, by palpation and auscultation, you may be able to discover the position of the child in the womb,—whether it presents by the vertex or the breech,—and, if the abdominal walls are thin, you may possibly know if the occiput is anterior or posterior.

Having satisfied yourself that labor is commencing, you should encourage her by saying that her pains are natural and that she is doing well; that she can walk about her room, or lie down, as she pleases. Then go away for a while, telling her that you will return in good time; for this will assure her that she is not seriously ill, and she will feel less anxiety than if you were to remain constantly with her.

Should there be no change in the os in two or three hours, and the pains severe during that time, I usually give twenty grains of the hydrate of chloral with one-eighth grain of sulphate of morphia, which will allay them and may put her to sleep, but will not stop the progress of labor, for the os will soften and dilate more rapidly under this treatment.

When the os attains the size of a half-dollar, you must remain, for then it may dilate very suddenly and your help might be needed at any time. Now the presentation can be ascertained, which, as the rule, will be of the occiput, either anterior or posterior. If the former, let it alone; for it will descend readily into the pelvic cavity if the relations between the pelvis and the fœtal head are proportional. But if it present posteriorly, my plan has usually been, when the os is sufficiently dilated, to change the position to an occiput front, and thus shorten the misery and pains of my patient.

The patient may desire to have her back supported, and this can be permitted by allowing some one to place their hands across the lumbar region and press gently during the continuance of the pain; or by the nurse sitting on the bed and putting the soles of her feet (protected by stockings) against the back, by which much relief may be afforded to the sufferer.

If the labor be slow, a change of position is sometimes beneficial, and some women will get on their hands and knees or kneel beside the bed on the floor, assuring you that they can help themselves better by such a proceeding.

During this stage the membranes may rupture and the liquor amnii be evacuated suddenly. To guard from being deluged by this overflow, it is prudent to protect your arm and hand with a napkin.

The womb will now contract more forcibly to expel its contents, and the head advances along the pelvic canal by a somewhat spiral movement until it reaches the perineum, which it gradually distends as it moves onward to the outlet. My plan has been to support gently this distended and bulging perineum with the left hand (protected by a napkin), for its thinning walls might yield and be torn by a sudden impulse of the head when propelled by a strong pain. Although some object to this proceeding as useless, yet I have never seen any injury result from such action, and it certainly does no harm. This gentle pressure should be made on the posterior part of the perineum and coccyx, allowing the anterior part to yield.

When the head is born, see if the cord is around the neck, and if so it should be loosened and slipped over the head or shoulders, whichever can most easily be done, so as to prevent the child from being strangled. Another pain will usually bring the body. If, however, it does not come, pressure should be made on the uterus, whilst the accoucheur places one or two of his fingers in the axilla, and, grasping the head with the other hand, makes traction to deliver the body. Immediately, or in a few minutes, the child will cry out, and respiration is established. If, however, this does not occur, a smart slap on its buttocks or a dash of cold water on the breast (followed by friction), or rolling it according to Marshall Hall's method, will generally start up its vocal organs, to the great joy of the mother,—and, I may say, to the satisfaction of the doctor.

When the pulsation of the umbilical cord has somewhat diminished, a ligature

made of several strands of thread is applied to it about two inches from the navel, and the child may be separated from its mother and given to the nurse. Some apply a second ligature before cutting the cord, to prevent bleeding from the placenta; but this is objectionable, for a slight hemorrhage from the maternal end of the cord will empty the placental veins and thus diminish its size and promote its expulsion.

The expulsion or removal of the afterbirth constitutes the third stage of labor, which may occur very quickly or be retained for twenty minutes or a half-hour, when pressure should be made on the abdominal walls, or the squeezing process called the "Crédé plan" adopted, which consists in grasping the womb externally with the hand and forcing out its contents; or traction should be made on the cord whilst the hand or the fingers are inserted through the relaxed os uteri, and, having seized the placenta, gradually detach it, twisting it upon itself so as to separate all the membranes from the uterine cavity. This appears to be the proper proceeding; for the placenta, having accomplished its purpose, is of no further use, and, being a foreign body, should be removed as soon as possible, for the safety of the mother. To stimulate the uterus to contract, a teaspoonful of the fluid extract of ergot is sometimes given immediately after the child is born.

If there be a laceration of the perineum requiring your attention, it should be closed at once by two or three stitches; but if it be a very slight tear, let it alone, for it will heal itself. Any clots remaining in the vagina should be removed; and when the uterus is reduced to a firm and hard globe, a binder can be applied to brace up the relaxed and distended abdomen. The bandage is objected to by many accoucheurs; but if it be kept well down below the hips and across the pubic region, it will afford good support to the relaxed parts; besides, the mothers usually request its application in order to prevent a "pendulous belly."

The objectors to a binder on a parturient woman would certainly apply one to an ascitic abdomen when it had been tapped: therefore I can see no valid reason for the objection in this case.

The patient is then placed more comfortably in the bed, the soiled things are removed, a dry napkin is applied to the external parts, and the room is darkened, so that she may be allowed to rest for several hours. The accoucheur, however, should remain for some time, to watch the pulse and ascertain the amount of the discharge; and, before he leaves, he should give some general instructions concerning the mother and child.

He should repeat his visit in from six to eight hours, to ascertain her condition.

But this will lead me to another branch of the subject, which is not within the scope of this paper, and therefore I will close by thanking you for your attention to this review of our first lessons in midwifery.

1324 North Fifteenth Street.

A NOTE ON THE RESORPTION OF TISSUES.

BY W. XAVIER SUDDUTH, M.D., D.D.S.,

Director of the Physiological and Pathological Laboratory of the Medico-Chirurgical College.

NATURE is conservative, retaining only such tissues in the body as are productive of benefit to the economy. The process of resorption is constantly going on; cells and tissues, having performed their life-work, are continually being broken down and removed by and through the lymphatic system. It is not to these conditions, however, that I now desire to direct attention, but to the removal of the products of inflammation, blood-clots, ligatures, and foreign bodies of every nature that become embedded in the tissues of the body. The removal of such substances is dependent upon the action of specialized cells, called resorptive or *giant cells*, and the process is physiological. The foreign body acts as a stimulant to cellular activity. The foreign substances act as local disturbers of the equilibrium of the circulation: there is called to the point of irritation greater supply of blood than is normal; this results in partial stagnation, and, as a further result, exudation of white blood-cells occurs, the extent of the exudation being dependent upon the extent of the local irritation.

In the case of small particles, such as coal and stone, etc., the white blood-cells take them up by flowing around them and carrying them to a neighboring gland, where they are deposited.

Insoluble substances, if not in a high

degree irritant to the surrounding tissues, may be encapsuled and held in the tissues. But, nevertheless, nature makes an effort to remove them. The migrated cells which form the hyperplastic granulation-tissue of circumlocution contain many multinucleated cells, the product of rapid cell-multiplication. Fleming has established beyond dispute the fact that cell-division is dependent upon nucleus-division. In some instances, however, the nucleus divides, and a subsequent division of the cell does not follow. In this case, multinuclear or *giant cells* are formed. We do not know positively why cellular activity results; but it is probable that the cells are stimulated to an increased assimilation of cell-pabulum. But an increased supply of nutrition does not always produce giant-cells. Some authors hold that giant-cells, or *osteoclasts*, found in connection with resorption of bone, are produced from the liberated bone-cells; but the fact that giant-cells appear in connection with the resorption of dead bone and other hard tissues which do not contain living bone-cells seems to establish for them an independent identity. Ziegler, when speaking of the erosion of bone, uses the terms osteoclasts, giant-cells, and resorption-cells as synonymous, and asserts that they arise from multiplication of exuded white blood-cells.

The presence of giant- or resorption-cells is general where tissues are to be resorbed, whether it be in the normal development of bone or in the resorption of the roots of temporary teeth. Here they act as nature's physiological agents in the removal of tissues which have served their life-purpose. In fact, all the processes of nature are physiological; her agents—cells—are developed to perform well-known physiological actions, and when a pathological result is produced it has its origin in some outside influence. Cells have not the power to produce pathological results unless stimulated by some agent which lies outside of physiological bounds, and when so stimulated they act through their own peculiar channels. Many physiological processes present pathological appearances; but when we study their deeper expressions we find that they are purely physiological. I look upon giant-cells as nature's physiological agents, by whose aid she removes tissues which have performed their life-office or which by their presence are hurtful to the animal economy.

The resorption of tissues through the agency of giant-cells is therefore to be regarded as a purely physiological process. The pathological phase is found, not in the removal of the tissue, but in the irritant which preceded the resorptive process and made it necessary. Thus far, too much stress has been laid upon the visible expression of nature's effort to remove the irritant, and too little on the character of the irritant itself. Pathological results may attain to the resorption process through the action of giant-cells by reason of the juxtaposition of healthy tissue. Nature, in her effort to remove the irritant, acts upon the surrounding tissue. This probably occurs more or less in all resorptive processes; it is, however, incidental.

Giant-cells are found in disease where great cellular activity exists,—as, for example, in miliary tuberculosis, syphilis, myeloid sarcoma, and hyperplastic granulation-tissue; they are also found in connection with the resorption of bone in normal development, the roots of temporary teeth, and other bodies that nature desires to remove. They are developed in all the above-named cases, unless the exuded cells are destroyed and a purulent condition produced.

In caries of bone due to extension of constitutional diseases, such as tuberculosis and syphilis, it seems to me that it is perfectly rational, from the knowledge we now possess of the specific vices of these diseases, to say that the cause of irritation lies in the micro-organisms which are found in connection with them. The case is not altogether clear for syphilis, but no doubt exists regarding the direct connection between the tubercle-bacilli and tuberculosis. Nature seeks, by the destruction of local territories, to limit the action of the irritant; and when *caries* accompanies this process, it is often the indirect and not the direct point of attack.

In myeloid sarcoma, though giant-cells are present, we have as yet been unable to demonstrate any local irritant. That such a condition does exist in connection with the disease I have no doubt. The action of the giant-cells is the same in all cases: they secrete a fluid which has the power of digesting the tissues in their immediate neighborhood. In claiming this attribute for them we do not go beyond the physiological action of cells.

The process of digestion is well known

to every student of physiology. In the stomach, glands secrete certain fluids by whose action that which we call food is so changed that it can be taken into the blood and assimilated by different parts of the body. A failure on the part of these glands to produce their normal fluid will cause what we term indigestion. Ordinary food-stuffs, unless prepared and dissolved by the fluid secreted by the glands of which we have been speaking, cannot be assimilated. We find that what is true of the digestion of food is also true of the digestion of tissue. In order that a tissue may be removed, it must first be digested by the cell-fluid, after which it can be taken up by the lymphatic system. It is true that very small particles, by reason of their minute subdivision, do enter the lymph-channels; but they are not assimilated into the general system, they are deposited in the first gland into which the lymphatic empties. Instances of this kind are found in cases of respired particles of coal- and stone-dust, and as a consequence we have the pathological condition known as the "coal-miners'" and "stone-hewers'" lung.

As I have already said, in order that any tissue may be assimilated it must first be digested. In the cases above mentioned the soluble ferment is secreted by the giant-cells at the point of irritation.

The juxtaposition of the secreting cells and the tissue to be resorbed is a matter of essential import. The ferment or fluid in question is not an exuded fluid of the blood; it is as truly a specialized fluid as are the secretions of the peptic glands of the stomach. The nature of the body to be resorbed has no more influence in the production of the secretions than have the various food-stuffs which are taken into the stomach over the secretions of the stomachic glands. Resorbed and resorber must be in actual contact, as is seen in every instance where tissues are to be removed.

Such are the facts, briefly stated, from which I have drawn the conclusion that the resorption of bone in normal development, of the roots of temporary teeth, of provisional cartilage, of sponges in sponge-grafting, of catgut ligatures, of blood-clots, and of all foreign bodies that are capable of digestion is a physiological process, and is accomplished by and through the agency of resorptive or giant cells.

IMPROVED SEWERAGE AND SEWAGE-UTILIZATION AT ATLANTIC CITY.

BY BOARDMAN REED, M.D.,
Late Physician to the Mercer Memorial House for Invalid Women, Atlantic City, New Jersey.

A NUMBER of medical friends having requested the writer to give an account of the improved system of sewerage now in operation in Atlantic City, he takes the present opportunity of doing so.

It is clearly not only the right, but the duty, of physicians who send invalids to the sea-shore or the mountains to inquire closely into the sanitary condition of the place selected. When they prescribe sea-air or mountain-air as a supplement or succedaneum to drug-treatment, they may properly insist that it be not mixed with sewage-emanations or marsh-miasms.

In the mountains perfect sewerage is usually not difficult to achieve, though even there it is often sadly neglected. On the New Jersey beaches it has been a most difficult problem. Very few, if any, of them present topographical conditions including sufficient grades to insure efficient natural drainage. But, even supposing this defect to be overcome, there is at most of them no convenient river into which to discharge sewage. To discharge it directly into the ocean in front of the bathing-grounds, as is done at some of these places, is manifestly highly objectionable. To let it empty into a sluggish creek or open ditch running through the town, as is the method at other sea-side resorts, is even more dangerous.

In preference to such inefficient and really perilous methods of so-called sewerage, the sanitary authorities of Atlantic City long retained the old vault-system, surrounding it, however, with every possible safeguard, such as ventilating-chimneys at the hotels and frequent removal of the offal by odorless excavators.

However, with the continued growth of the place and the introduction of extensive water-works, underground sewerage became a necessity. Years previously numerous conduits had been provided for carrying off the surface-water, while the raising of the level of the streets and adjacent properties, and compulsory filling of low lots, had further improved the surface-drainage.

The one thing needful remaining was to

make better provision for disposing of laundry-water, kitchen-slops, and human excreta. After studying various plans and sending committees even as far as Pullman, Illinois, to investigate the practical value of pumping-stations and sewage-utilization, the authorities adopted for Atlantic City what is known as the "West" system, and contracted with the Improved Sewerage and Sewage-Utilization Company of New York to put it in operation.

Briefly stated, this system comprises (1) a pumping-station and reservoir or well with deep-laid sewers converging to it; (2) filter-beds situated at a considerable distance from the well, out on the salt-meadows.

The reservoir is placed on the edge of the meadows, next that side of the town which is farthest removed from the ocean and the hotels, being half a mile to a mile distant from the latter. It is a walled pit, cemented on both the inside and outside, thirty feet in diameter and twenty feet deep. Connected with it is a ventilating-shaft seventy-five feet high. The main sewer, which empties into the bottom of this well, is a cylindrical iron pipe twenty inches in diameter. Connecting with this is a system of sub-mains and laterals of heavy glazed terra-cotta pipe, the best product of the Trenton works. These are respectively twenty, fifteen, and ten inches in diameter, according to location. All the larger ones are laid below the level of the ground-water, upon a substantial wooden support or bed.

By thus excavating to an extraordinary depth and conducting the main to the bottom of a well twenty feet below the ordinary level of the town, the necessary grade was obtained to render the sewers self-cleansing, and the fact that they are so has been demonstrated by inspection of them at various points. All such inspections have revealed a rapid current and an entire absence of deposit.

The system has been in successful operation since the 20th of July, 1885, and most of the hotels and boarding-houses are now connected with it. Right here a word of caution must be given to physicians who send patients to Atlantic City. They should warn them against taking up their residence in houses not yet so connected. All houses will ultimately be obliged to use the sewers; but, as is the usual experience in such cases, a very few over-conservative proprietors of hotels, as well as a considerable number of owners of cottages rented to summer visitors, are putting off to the last moment this to them unwelcome innovation. Without such a warning, visitors might install themselves in unsewered houses, and thus, though surrounded by well-drained premises, be only a little better off than the entire population of the numerous fashionable sea-side resorts where no attempts at underground sewerage have yet been made.

Just as there were numerous croakers prompt to assert that sewers could not be laid at such a depth in a sandy soil, far below the water's level, so there are still sceptics who say "the thing will not work." The only answer to these is that it is working, and is entirely satisfactory. The sewage is conveyed swiftly by gravity to the well or reservoir, and is forced thence, by two powerful steam-pumps having a joint capacity of upward of sixteen hundred gallons per minute, through an iron pipe to the filter-beds. The liquid after emerging from these is only slightly discolored, and by extra care and frequent changing of the filtering-material it has been found practicable to render it clear and pure enough even to drink. This may seem incredible, but Parkes, in his "Practical Hygiene," quotes Mr. Dyke as claiming for a similar system of sewage-utilization with filtration at Merthyr-Tydvil, that the "effluent water was stated to be pure enough to be used for drink."*

There is absolutely no odor at the well, not even when one stands upon the floor inside with the trap-door open. The reason is that the sewage empties there in a fresh condition, before having had time to decompose. Then, even if gases had formed, the high ventilating-shaft adjoining the well and connected with the fire of the engine-room causes a powerful draught in that direction. A slight odor is detectable at the filter-beds; but this never reaches any inhabited part of the city proper. If there ever should be sufficient smell created by the process to reach even that portion of the town nearest to it, a prompt and thoroughly effectual remedy, which could be enforced at any time, would be to compel the company to move the filter-beds half a mile or even a mile farther away.

The only criticism of this plan which seems to possess any plausibility concerns

* "A Manual of Practical Hygiene." By Edmund A. Parkes, M.D., F.R.S. Sixth Edition. Vol. ii. p. 36. New York, W. Wood & Co.

the durability of the material of which most of the pipes in Atlantic City are constructed. This is the best heavy glazed terra-cotta, similar to that used by Colonel Waring and other sanitary engineers in laying small-pipe sewers. It is possible that such pipe may be ultimately found not to be sufficiently durable under the peculiar conditions here existing, and that some stronger material may have to be substituted. This is a question which can be settled only by a longer experience, but one which does not affect either the principle or practicability of the system.

The problem of effectively and safely draining cities situated on flat plains, with no convenient water-course into which sewage could be discharged, had been previously solved at various places in Europe by the use of pumping-stations and some form of sewage-utilization. The model city of Pullman, Illinois, a suburb of Chicago, was the first in this country to attempt such a plan, and it is entirely satisfied with the result. Atlantic City had even greater difficulties to overcome, on account of the peculiar character of the underlying ground. But it has been demonstrated that sewers of any desired material can be laid even there at any required depth. That point being established, and the sewers once properly laid, the result with a pumping-station and filtration of the sewage can no longer be open to doubt.

THE MORTALITY FROM RABIES IN THE LAST TWENTY-FIVE YEARS IN PHILADELPHIA.

BY JOHN G. LEE, M.D.

DURING the past few months the profession and the public have had such a surfeit of the subject of hydrophobia that any further remarks may fail to excite that interest which all facts pertaining to this dread disease undoubtedly deserve.

Nevertheless, the following figures, obtained by me from the records of our local Health-Office (thanks to the courtesy of Registrar Chambers, of that department), may possibly prove of interest to those studying its occurrence and mortality among the human species.

As neither in 1860 nor in 1884 were any cases of rabies reported to the authorities, our labors are narrowed down to the consideration of a period of only twenty-three years, from 1861 to 1883 inclusive, during which time sixty deaths from "hydrophobia" (?) are registered. These deaths occurred by years in the following order:

1861 . .	1 case.	1872 . .	1 case.
1862 . .	4 cases.	1873 . .	1 "
1863 . .	6 "	1874 . .	3 cases.
1864 . .	3 "	1875 . .	2 "
1865 . .	2 "	1876 . .	4 "
1866 . .	2 "	1877 . .	4 "
1867 . .	2 "	1878 . .	2 "
1868 . .	0 case.	1879 . .	3 "
1869 . .	7 cases.	1880 . .	1 case.
1870 . .	1 case.	1881 . .	5 cases.
1871 . .	1 "	1882 . .	2 "
		1883 . .	3 cases.

The smallest figure, 1, was recorded six times,—viz., in 1861 and 1880, and four times consecutively from 1870 to 1873; as to the higher figures, beginning at 7 for 1869, 6 for 1863, and 5 for 1881, then scaling downward with 4 deaths in three different years, 3 cases four times, and, finally, 2 cases six times, we are unable to observe any distinct periodicity in their occurrence, and hence may assume that the placid and unemotional temperament of our fellow-citizens has preserved them from the effects of panics taking place in other communities.

Next year's report of this year's mortality-statistics cannot fail to prove interesting, on account of the opportunity they will afford for special observation as to whether the recent scares in neighboring States have exerted any influence here.

As in nearly all deaths due directly or indirectly to traumatic causes, we find the male element largely predominating, fifty-two of our sixty deaths being males,—a fact easily explained by the reason that men, from the nature of their occupations, are more exposed to the bites of rabid animals, as for the same reason and on account of the ampleness of their dress the gentler sex run far less risk.* Of the fifty-two males, twenty-two are recorded as adults and thirty as minors, three of the eight female victims being adults and the remaining five minors,—the latter in each instance showing an excess over the former.

Considering the ages of these cases in detail:

Period.	No. of Cases.	Period.	No. of Cases.
1 to 2 years.	1	20 to 30 years.	7
2 to 5 "	5	30 to 40 "	8
5 to 10 "	14	40 to 50 "	6
10 to 15 "	9	50 to 60 "	4
15 to 20 "	6		

* Vide "Rabies and Hydrophobia," by George Fleming, F.R.C.S., etc. London, 1872.

Our figures correspond with the results of other observers,* for, while no age up to sixty seems entirely exempt, nearly half the victims are children, the disease having taken place during what Bouley† rightly calls "the age of imprudence, weakness, play, and teasing."

A record of the nativity of the dead having been kept only since 1871, this feature is therefore incomplete; though, as might be expected in our community, eight foreigners are outnumbered by twenty-four Americans.

The records of the months in which these deaths occurred is equally disappointing, beginning as it does only in 1874, since which time but twenty-nine persons have succumbed to this disease. These cases massed in groups of months in their relative order of frequency give us the following result:

December,	5 cases.	January,	2 cases.
February,	4 "	April,	2 "
September,	4 "	July,	1 case.
October,	4 "	November,	1 "
March,	3 "	June,	0 "
May,	3 "	August,	0 "

Which again grouped by seasons:

December,	5		March,	3	
January,	2	11 cases.	April,	2	8 cases.
February,	4		May,	3	
June,	0		September,	4	
July,	1	1 case.	October,	4	9 cases.
August,	0		November,	1	

These figures may be too few to show conclusively that seasons or months influence to any marked degree the occurrence of rabies in Philadelphia.

It ought, however, to be stated that an analytical study of the Seventh, Eighth, and Ninth Census Reports of the United States‡ shows a different result. One hundred and twenty-seven deaths from rabies are reported from the whole country for the three census years. They occurred by seasons as follows:

Seasons.	1850.	1860.	1870.	Total.
Winter . .	9	9	13	31
Spring . .	8	5	13	26
Summer . .	6	15	20	41
Autumn . .	3	9	17	29
Total . .	26	38	63	127

* Vide Fleming, op. cit.

† Vide "Hydrophobia: Means of avoiding its Perils, etc.," by H. Bouley, of Paris, translated by Liautard. New York, 1874.

‡ The nosological classification of the Tenth Census does not specify "hydrophobia."

Grouped by months for the years 1860 and 1870 only, August heads the list with 18 cases, followed by June with 11; September, with 10; January, April, October, November, 8 each; December and February, 7 each; March and July, 6 apiece; May coming last, with 4 cases,—the greatest number of cases occurring in the summer.

Sixty-seven of the total number of cases were minors, and sixty were adults, their ages ranging from twenty to ninety years. Eighty-three were males and forty-four females; thirty-three of the former are known to have been minors, as were also twenty-four of the latter.

These one hundred and twenty-seven cases are about fairly distributed among the different States and Territories, save that in 1870 the large number of twenty-two cases occurred in Louisiana.

As we have seen from the foregoing figures, the disease seems never to have committed any great ravages in our city. Indeed, while from 1860 to 1884, a period of twenty-five years, the expectancy of it occurring among any ten thousand births was 1.8, the real mortality has been but 1.4 to every ten thousand deaths from all causes.

333 South Twelfth Street, February 9, 1886.

TRANSLATIONS.

Alcoholic Neuritis.—A communication by M. Gombault was read at the Académie des Sciences (February 22), in which the lesions of alcoholic neuritis were discussed. In addition to those nervous fibres presenting the characteristic signs of Wallerian degeneration (Ranvier), and which form the great mass of the altered fibres, a small number of others are found, at the level of which the lesion presents characters entirely different. On one hand, the myelin sheath, instead of being segmented and forming large drops, is finely emulsified. Most frequently the fine fatty particles thus produced are enveloped in large cells, which constitute the interior of the sheath of Schwann a large tube of granular cells. On the other, the axis-cylinder persists, whilst in the Wallerian degeneration it rapidly disappears. The writer had seen an analogous condition while investigating experimental neuritis due to lead-poisoning. The cases

of neuritis are presented in two distinct phases: in one of which a certain number of interannular segments are attacked in an isolated manner (segmentary neuritis), in each of which the axis-cylinder persists (periaxial neuritis), and, as a consequence of this persistence, the portions of fibres situated below the diseased points are not at all changed. This periaxial segmentary neuritis may terminate in two ways: either by the restoration of the affected parts and the formation of short and empty segments, or, the lesion progressing, by the destruction of the axis-cylinder at the level of the diseased segment, inducing the Wallerian degeneration below the divided point. Segmentary periaxial neuritis also explains the development of this degeneration, and constitutes a "pre-Wallerian" phase of neuritis. It is this phase "pre-Wallerian" which M. Gombault establishes as the present conception of alcoholic neuritis.

The Prophylactic Treatment of Hydrophobia.—In a communication to the Académie de Médecine (March 2), M. Pasteur reported the results of the application of his method in order to prevent rabies after receiving the bite. Since last October, when he announced his method of curing hydrophobia, numbers of cases have been presented to him: up to the time of speaking, three hundred and fifty had been treated by inoculations. After analyzing the statistics of these cases, he turned his attention to the period of latency or incubation of hydrophobia, and showed that it was between the fiftieth and sixtieth day that the symptoms had usually manifested themselves. But among the various persons, differing in sex and in age, one hundred treated by the new method had been bitten before the 15th of December,—that is, more than two months and a half ago; the second hundred had more than six weeks or two months of interval without symptoms. Referring, in conclusion, to various prominent persons who had already died from hydrophobia, M. Pasteur concludes that the prophylaxis against hydrophobia has been discovered, and that there is a place for a new establishment for vaccinating against the rabies.

Lactic Acid for Epithelioma.—Von Mosetig-Moorhof recently presented a paper on the local therapeutic value of lactic acid before the Royal Society of Physicians in Vienna, in which, after reaffirming the value of this agent in the treatment of laryngeal phthisis, he reports cases of lupus and of epithelioma showing marked beneficial results obtained by its use, both as a topical application (in concentrated form) and injected (diluted one-half) into the base of the growth.—*Wiener Med. Wochenschrift.*

Epilepsy due to Eye-Lesion.—M. Galezowski reported a case in which epilepsy was apparently caused by the reflex irritation from the stump of an eye, which had been partially removed, after injury received during hunting, some six years before. The lecturer removed the remainder of the eye, and the epileptic attacks ceased. He referred also to a case in which a sympathetic optic neuritis set up in the other eye was cured by removal of a disorganized eyeball. The mechanism in each case was believed to be a transmission of the morbid process along the vascular walls, probably with the aid of the vaso-motor nerves, whence come endarteritis and thrombosis and their consequences.—*Rev. de Thér. Med.-Chir.*

Ergot for Dysentery.—In a case of a man, 44 years of age, suffering with acute dysentery, in which bismuth and laudanum had failed, Dr. Du Rocher gave calomel in large doses with no better results. He then resorted to powdered ergot, of which forty-five grains (3 gr.) were given in six doses through the night. The next day there were only two evacuations of the bowels, without a trace of blood. The ergot was continued, and twenty-four hours later the loose discharges were entirely suppressed and convalescence commenced. The reporter was very favorably impressed with the results from the remedy.—*Le Progrès Médical*, No. 10.

Apone.—A new compound, used externally either pure or diluted with oil, is recommended by V. Poulet as an anodyne revulsive. It consists of capsicum ʒvjss, aqua ammoniæ fʒiij¼, spts. thymi and chloral āā ʒijss, and alcohol Oij. The capsicum is to be macerated for a month in the alcohol mixed with ammonia water; the tincture is then expressed and mixed with the other ingredients. It may also be given internally in doses of ten to twenty drops.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 3, 1886.

EDITORIAL.

"TISSUE-REVERSION."

IN the leading article on another page, the theory is advanced that the blood of pernicious anæmia furnishes an instance of reversion to the type of blood found in the cold-blooded animals. The proofs adduced in favor of this view appear conclusive, and among them is a kind of evidence which cannot be controverted,—namely, the photographs of the blood-corpuscles in health and in the disease in question. Dr. Henry does not claim that the blood-corpuscles of pernicious anæmia are *precisely identical* with those of the cold-blooded animals. Were this the case, the peculiarities to which he calls attention would have been long since described. The blood-corpuscles of pernicious anæmia, for example, are not, as a rule, nucleated, although nucleated corpuscles have been observed in this affection; but with this exception, if it be one, they resemble the corpuscles of the cold-blooded animals in all their principal characteristics,—namely, in "their number, their size, their shape, and the amount of hæmoglobin they carry."

This interesting instance of "tissue-reversion" stands, we believe, alone, for, as claimed in the article referred to, the blood of pernicious anæmia is not a return to the type of blood found in the human embryo, but to that of an adult "ancestral form." We are acquainted with a sufficient number of instances of return to embryonic condition to warrant asking the question whether or not such return is to be invariably detected, either in the anatomical alterations of a diseased organ or in its functional manifestations. Atelectasis pulmonum is an undoubted instance of such return, due to the relative action of a cause, want of air, which in the fœtus is absolute. A condition of general atelectasis in the adult is inconceivable merely because there is no supplementary respiratory organ. The inflammatory state, wherever found, is a return to the earliest embryonic condition. This is acknowledged by the universal employment of the term "embryonic cells." If truly embryonic, one would naturally expect to be able to trace in them some tendency towards stratification such as takes place in the embryo. That there is no well-marked stratification of inflammatory products is evident. Such a mechanical arrangement could never have escaped the eye of even the most inattentive observer; but when the question is asked whether there is any subdivision of these cells based upon separate discharge of *function*, a reply cannot be given until some more thorough investigation of the subject has been made. Even on superficial investigation, a twofold functional division is seen in at least one instance. Thus, in the repair of the surface of the body, it is manifest that the external cells supply the new epithelium; the internal, the blood-vessels and connective tissue. The glands, however, are not reproduced.

That disease is a perversion either of structure or of function, or of both combined, is self-evident. If this perversion be retrograde,—and who may deny this?—it follows that the more careful investigation of disease and its manifestations may elicit numerous facts analogous to the instance of "tissue-reversion" which we have made the text of this article.

AN INTERESTING MEDICO-LEGAL QUESTION.

AFTER several delays, Monday next, April 5, has been set for the trial in a Philadelphia court of a case which deserves more than a passing notice, since its settlement will directly affect every

physician in this State who may be called upon to address an audience upon medical subjects.

The facts are, briefly, these. Dr. Carl Seiler, several months ago, before the Alumni Association of the College of Pharmacy of this city, and within the hall of the college, delivered a lecture upon "Hay-Fever." After he had explained the modern views of the neurotic nature of the disease, he stated the fact that it was often excited by pollen from various plants, as well as by particles of dust in the air, and he pointed out the fact that in the treatment all powders are therefore injurious, since they act as irritants to the inflamed mucous membrane. In impressing this point upon his audience, speaking extemporaneously, he condemned all powders for this reason, and told his audience not to use them. Among the examples which he mentioned was a proprietary article in the form of a snuff, which had been advertised in this city as a "cure" for hay-fever. The professional experience of the lecturer, and his knowledge of the nature of the disease in question, he believed, enabled him to form and qualified him to express a positive opinion as to the dangers of a remedy of the kind indicated when used in this highly objectionable manner.

For this statement, made before a medical audience (for pharmacy is a branch of medicine), Dr. Seiler has been prosecuted by the owner of the nostrum, who claims exemplary damages for injury to his business. If the case is decided in favor of the plaintiff in this case, medical men may consider it as an intimation that the patent-medicine business has grown so powerful that it may now issue its mandates directly to the profession, and that hereafter, if proprietary remedies are mentioned at all in our discussions, it shall only be in terms of commendation and with due respect. Our sympathies are with Dr. Seiler, who on this occasion is the champion of the profession on behalf of free speech in medical societies, whose proceedings hitherto have been generally regarded as privileged. We repeat that this is a question in which every physician is more or less interested, and any who can do so should cheerfully render assistance to the defendant in his annoying situation. Judging merely upon the equity of the case, it would seem, however, a very proper one for a non-suit.

ADVERTISING DOCTORS.

SUCCESS in the medical profession is variously estimated when viewed from different stand-points. There are some who, thoroughly imbued with the dignity of their calling, are engaged in honest and consistent efforts to elevate it to what they consider to be its proper standing among the learned professions and in the estimation of the public. The success for which these strive is strictly a professional one, and a brilliant example of what may be attained in this direction was seen in the career of the distinguished American physician whose sudden death has so recently deeply moved the profession not of this country alone, but of Europe also.

In contrast with such are those who practise the transparent arts of the charlatan in order to attract public notice to themselves and acquire wealth and an unmerited prominence. The fact that the latter class, to speak moderately, does not enjoy the respect of the profession, beyond all question exerts a very wholesome effect in deterring some from indulging in unethical acts. The knowledge that the appearance in the public prints of reports of surgical operations or frequent interviews upon medical subjects will lead to the suspicion that they are published with the connivance of those whose names are thus displayed has often a discouraging effect upon the enterprise of reporters. Endorsements of wines, mineral waters, and instruments, when they appear in the daily

papers, are likewise in themselves a reflection upon the professional standing of those whose names voluntarily appear; and, as this sentiment is generally shared in professional circles in this city, we are glad to say that such an impropriety is of rare occurrence. During the past week, however, we have noticed an exception, which we hope will not be taken as a precedent. In this matter the older physicians should set the example for the younger, and not the reverse.

LEADING ARTICLE.

THE DIAGNOSIS OF PROGRESSIVE PERNICIOUS ANÆMIA, WITH PROOF THAT THE BLOOD IN THIS DISEASE IS AN INSTANCE OF REVERSION TO A LOWER TYPE.

BEFORE entering upon the proper subject-matter of this paper, I will say a few words concerning the nomenclature of this form of anæmia. Of late years the claims of Addison to its discovery have been successfully advanced by Dr. Pye-Smith and others in England and America, and the term "idiopathic" substituted for the terms "progressive pernicious," hitherto used to describe it.

Although I fully admit that Addison was the first to give a description of this affection, and have no wish to detract from the merit of his discovery, yet the fact remains that Addison's work in this field of research, when compared with that of more recent observers, was exceedingly meagre. He recognized clinically the existence of a fatal form of anæmia which he was unable to associate with any anatomical lesion. Is that, I inquire, a sufficient reason for the adoption of a term implying utter ignorance regarding the pathology of a disease which I venture to say is as clearly described and as thoroughly understood as, for example, diabetes mellitus? I protest against the introduction of the term "idiopathic" in this connection, if for no other reason than that it will cause confusion, and thereby tend to prevent the recognition of a rare disease. We all have a more or less well defined idea of what is meant by progressive pernicious anæmia. The term is used all over the world, and the exceptional cases of recovery do not invalidate the fact that, as a rule, the affection is both progressive and pernicious.

The late Dr. Charles Hilton Fagge, in the introductory chapter of his posthumous work on the "Practice of Medicine," has an excellent section upon clinical and anatomical nosology, in the course of which occurs the following: "To say that a patient has 'hepatic ascites' is far more accurate than to speak of him as affected with 'cirrhosis of the liver,' if, after all, we are not certain that the lesion may not be peri-hepatitis, or cancer, or gummata. To define a cerebral case as one of 'hemiplegia' is much better than to call it 'softening of the brain,' if the lesion is really but little less likely to be a clot of effused blood, or a tumor, or an abscess." Dr. Fagge justly considered that the "phenomena which are commonly spoken of as symptoms are parts of the disease to which they belong, no less than the lesion or the specific cause or whatever else is taken as its main characteristic." In the light of such reasoning, it appears to me absurd to abandon a significant symptomatic term for one that has nothing to recommend it but its utter lack of meaning.

My remarks upon the diagnosis of this disease will be confined to a consideration of the data derived from a proper examination of the blood. I do not say that a diagnosis of this form of anæmia cannot be made without such examination, but merely that, after some years spent in its study, I would not pretend to do so. Facts derived from the history of the case are of great positive significance, and these, taken in connection with the negative result of physical examination and the "FACIES" of the patient, are almost conclusive. The latter is highly characteristic; so much so that in two cases under my care at the Episcopal Hospital in the spring of last year I predicted, the moment I saw them, that an examination of the blood would show them to be cases of pernicious anæmia. It is only proper to add that in a third case, a lad of extraordinary pallor, suffering from malarial cachexia, I made a similar prediction, and that it was not verified by the blood-examination.

The most interesting fact in connection

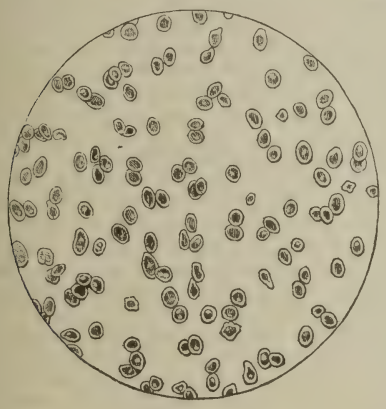
with the examination of the blood of pernicious anæmia, and one to which, so far as I know, attention has never been particularly directed, is that it demonstrates a reversion to the type of blood found in the lower animals. This might be justly regarded as a fanciful idea if it were based upon a resemblance of the blood of pernicious anæmia to that of the lower animals —birds, fishes, reptiles—in any one particular; but I propose to show that the red corpuscles in this disease APPROACH those of the lower animals in many, if not in all, of their chief characteristics: namely, in their number, their size, their shape, and the amount of hæmoglobin they carry.

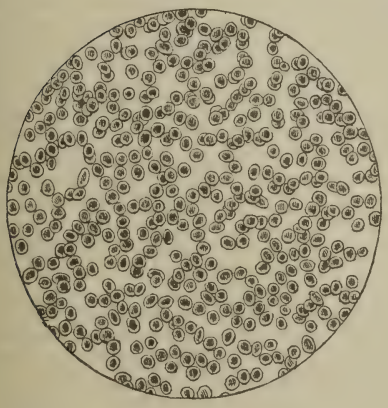
It is well known that the number of red corpuscles in a man of good health averages about 5,000,000 per cubic millimetre. Malassez found, in the blood of ten male Parisians, an average of 4,310,000. The amount of hæmoglobin in the same unit of measurement was 0.129 milligramme. The number of globules corresponding to one milligramme of hæmoglobin was, therefore, 33,400,000. In birds (chickens) living at liberty on a farm, he found an average of 2,500,000 corpuscles per cubic millimetre, and 0.123 milligramme hæmoglobin. One milligramme of hæmoglobin would, therefore, correspond to 20,682,000 corpuscles. In birds, therefore, the number of globules is reduced about one-half, while the quantity of hæmoglobin in a given amount of blood is not materially altered. In other words, each globule carries a much greater amount of hæmoglobin.

Without entering into the details of numerous examinations of the blood of reptiles and fishes made by Malassez, it will suffice to state in general terms that he found in the vertebrate series, in passing from birds to fishes, reptiles, and batrachians, a progressive diminution in the number of red corpuscles and an increase in the amount of hæmoglobin in a given amount of blood. The order in which these changes occur does not follow the usual division of the vertebrate series proceeding from above downward. Instead of birds, reptiles, fishes, the order in which these blood-changes take place is birds, fishes, reptiles. An interesting question is whether the increased quantity of hæmoglobin in a given amount of blood is due solely to the increased size of the red corpuscles as we descend the scale of animal life, or whether the amount in each globule is also increased. Malassez has studied this question, with the following result. He found that the corpuscles of man and of the pigeon contain the same proportions of hæmoglobin, but that those of the frog and lizard are much poorer in coloring-matter, while in the globules of the proteus the deficiency reaches its maximum. A human red corpuscle expanded to the size of that of the proteus would contain but one-third of its normal proportion of hæmoglobin. This deficiency of hæmoglobin in the corpuscles of the lower animals was attributed by Welcker to the presence in them of a colorless nucleus; but Malassez considers this inadmissible, and points out that the corpuscles of the pigeon contain in an equal volume as much hæmoglobin as those of man, in spite of the presence of a nucleus: their globular substance is therefore richer in hæmoglobin. Again, the corpuscles of the proteus contain only one-third as much hæmoglobin as those of the lizard, and yet their nucleus is not three times larger. Of all animals, the proteus has the smallest number of corpuscles (250,000 per cubic millimetre); but these, owing to their enormous size, have the largest quantity of hæmoglobin.

Turning from these interesting facts of comparative physiology to their bearing upon the subject of this paper, we observe in well-marked cases of pernicious anæmia: 1. A reduction in the number of the red corpuscles to a degree that is normal in the cold-blooded animals. It is not at all uncommon to find in this disease less than 1,000,000 corpuscles per cubic millimetre. My lowest counts have been 525,000 five days before death; 560,000 in a case in which recovery took place; and 315,000 a few hours before death. In the celebrated case of Quincke there were but 143,000 per cubic millimetre, and yet the patient recovered. Figures like these are, as has just been said, normal in the cold-blooded animals. 2. In pernicious anæmia the proportion of hæmoglobin is often much greater than normal. It has been observed by Laache and others to be double the normal amount. This, in the opinion of the writer, is the most remarkable feature of this disease, distinguishing it from all other forms of anæmia, and is due to the fact that—3, many, sometimes

the majority, of the corpuscles are greatly increased in size. This is well seen in the accompanying cuts, from photo-micrographs of diseased and normal blood made for me by Mr. W. H. Walmsley, of this city. The photographs of the two specimens were made under precisely similar optical conditions. The patient furnishing the diseased specimen of blood is a typical case of pernicious anæmia, and is still under my observation. By applying the points of a pair of compasses to the enlarged corpuscles, it will be proved that many of them are at least double the normal size. 4. The corpuscles are not only increased in diameter, but altered in shape, and have a decided tendency to assume an OVAL outline. So much so that, in measuring them in the manner indicated, we have to take into consideration the direction in which the measurement is made. THEY HAVE A LONG AND A SHORT DIAMETER.





That the blood of pernicious anæmia affords an instance of the law of reversion is thus indubitably proved. Numerous instances of the action of this law in disease may perhaps be found if sought for, but the writer can at present recall but one other, and that one does not apply to structural alterations, but to symptoms. The embryonic theory of tumors is not based upon the law of reversion, for in reversion the "adult organism possesses a character which is *never assumed by the normal embryo*, but which resembles an adult ANCESTRAL form to a degree which varies with the extent to which development has proceeded along the obsolete tract." *

The other instance of the law of reversion in disease to which I referred is that pointed out by Dr. J. Hughlings Jackson in the Croonian Lectures for 1884, on "Evolution and Dissolution of the Nervous System." This profound and original thinker has demonstrated that many diseases of the nervous system show "a reduction from the voluntary towards the automatic, in what the centre diseased represents." To quote from an editorial on these lectures in the *Medical Times and Gazette*, April 18, 1884: "It is, moreover, clearly shown that in many nervous disorders the symptoms are referable, on the one hand, to the modification or abeyance of the highest or most complex parts of the nervous system, and, on the other, to the activity of those parts immediately subordinate to them."

In other words, in some affections of nerve-centres the mode in which are performed the motor functions which they control is such as is habitual in some of the lower animals,—namely, automatic. This instance of reversion, interesting though it be, is, however, one of symptoms alone. I can, I repeat, at present recall no other instance than that recorded in this paper of genuine *tissue-reversion*. The field of science is so wide and the labors so many that I merely place my observation on record, without as yet claiming it as original. The most that one can hope to attain at the present day is to make new and varied application of facts which even he who runs may read.

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* "The Data of Alienism," by Charles Mercier, M.B. (London), *Journal of Mental Science*, April, 1883. The *italics* are my own.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

THE most remarkable thing on the *tapis* at present in Paris appears to be the studies of Professor A. Gautier, the eminent successor of Wurtz in the chair of Chemistry at the Paris Faculty of Medicine. He is taking up the physiological alkaloids produced by the animal tissues. These he calls leucomaines, as opposed to those yielded by the cadaver, which have become widely known as ptomaines. M. Gautier first studied the venom of serpents, from which he extracted alkaloids that produced various effects on animals, that were entirely different from those caused by the pure venom. Alkaloids of an analogous nature were extracted from saliva, blood, urine, and albumen; but it was particularly in muscles that these investigations have been made, in which Professor Gautier found xanthocreatinine and crusocreatinine. These alkaloids accumulate in the blood as soon as, from different reasons, the skin, kidneys, and the digestive tube cease to eliminate them. They then act on the nervous centres and give rise to a series of pathological symptoms which are the concomitant of various diseases. This incessant *auto-infection* is resisted by two different actions: one is the elimination of the poison, and the other is its destruction by oxygen.

Elimination by the kidneys is quite evident, and Professor Gautier had no trouble in finding a small proportion of them even in normal urine, which becomes very considerable as soon as there is any pathological state set up. Dr. Pouchet has observed this in cerebral maladies, and it is quite evident in typhoid. Their elimination by the digestive tube also seems to be certain, but here it is more complex in its nature, for it seems that a certain part of those found here are due to a bacterial fermentation of the aliments ingested, and which may pass inversely into the blood, as Professor Bouchard has asserted.

But a means that is much more powerful than the elimination of these bases is their incessant combustion by oxygen in the blood. The most of these poisons are in fact very oxidizable, and it is owing to this that the greater part of them disappear: so that in the normal state we find but a very small quantity of these leucomaines in the urine, because they have been burnt up in the circulating current, and after they are perhaps already in the tissues.

Let the slightest cause diminish the access of air to the blood, so that the quantity of hæmoglobin is diminished, as in any of the forms of chlorosis or anæmia, and at once there will be an accumulation of azotic substances (nitrogen-compounds) of the nature of ptomaines or leucomaines.

On this point there has been, so far, very little investigation; but already this theory explains the nervous troubles in chlorosis, in pregnancy, and also, to some extent, the good effects of inhalation of oxygen, which is sometimes so successful in relieving the vomiting that occurs during the course of pregnancy, which shows that these symptoms are produced by a retention in the blood of some of the poisons that are not well eliminated or else not completely burnt. He asks, now, if it is not supposable that fever itself coincides with a minimum of food and an augmentation in the proportion of oxygen consumed and carbonic acid eliminated, while the circulation, being more rapid than usual, does not discharge the poisonous principles of waste as well as in the normal state.

Professor Peter, struck with the physiological and therapeutic deductions to be drawn from these facts studied by Professor Gautier, brought to the last meeting of the Academy of Medicine an interesting paper, which he calls "Microbes and Ptomaines." He said, "I bring to-day the support of traditional medicine to the medicine of the future. Professor Gautier has demonstrated the existence of toxic ptomaines in living animals, and also found toxic alkaloids in the body, with other principles that are as yet not well determined or defined. Clinical experience is quite in accord with Professor Gautier, and what he calls *auto-infection* I have formerly called *auto-typhization*. The researches of M. Gautier give a terrible blow to the doctrine of the germ-theory. If the ptomaines result in truth during the evolution of normal life-action, it is quite sure that we do not need the microbian theory to explain the genesis of disease. Moreover, it should not astonish the practical doctor that these toxic substances develop themselves in the economy simply by the play of the vital forces. Do we not exhale every day carbonic acid, urea, etc.? What is urea? An alkali. If we manufacture an alkali, why should we not manufacture an alkaloid? The only difference is a degree of oxidation; the capital fact is that it is a vital phenomenon. These principles stated, permit me to support them by a few considerations.

"Life is a contingent phenomenon that is purely relative. We live only on condition that we renew ourselves, and consequently also destroy ourselves, without ceasing: so that we may say that we each carry a portion of a cadaver about with us, no matter what other name may be given to these products of disintegration, which are certainly the result of the activity of the nervous and muscular systems. Suppose, then, that this results in an insufficiency of elimination, even if the apparatus for that purpose be in good repair. What will happen? Why, what M. Gautier

calls *auto-infection*, and what I call *auto-typhization*. M. Gautier has completed for us the knowledge that we already possess of the phenomena of life. I would like to speak also of the other clinical problems that this matter calls up besides auto-typhization,—that is to say, poisoning one's self by one's self. There is also a *hetero-typhization*, or a poisoning of an individual by other individuals. Let me here speak of some facts that took place during the first years of my medical career.

"I was then a student under Chomel, when one day there came into the wards a young man who was in a state of great prostration, suffering with fever, muscular pains, etc. Chomel, after making an examination, said that he thought it was either a commencing varioloid or a typhoid fever. I was then ignorant, and was astonished at the great master hesitating at a diagnosis that was apparently so plain. Three days afterwards the man left the hospital cured! It turned out that he had come a long distance from the country on foot, sleeping out at night and eating almost nothing; in fact, he was suffering from what might be called overwork fever,—that is to say, a fever that resulted from the accumulation in his organism of the products of the disintegration in all the tissues. In a word, he was poisoned by the insufficiency of elimination. Let us suppose now that he had to travel a very much longer distance, say some five hundred miles; it would then be not a slight fever, but it would be typhus, the army fever when soldiers march rapidly, or the kind of fever seen in cattle-droves when they are driven great distances without rest or food. Typhus is, in fact, engendered by the accumulation of the extractive matters in the economy.

"So much for auto-typhization, notwithstanding that there is another element of which we must take account when it is an army on the march. This element is that, owing to the overcrowding, there is a respiration of an atmosphere that is charged with infection coming from the living body: this I call *hetero-typhization*. This method of understanding typhoid fever, as well as typhus, by overfatigue allows us to take into account the spontaneity of these diseases, which I believe in, and which does not prevent one from admitting that they may be also contagious through the miasms diffused in the air by those who are attacked with the disease, and, above all, through their fæcal matter. So far we have only looked at the hypothesis of a non-elimination of a sufficient quantity of the products of disintegration of the tissues when the apparatus for that purpose is intact; but suppose now that they are not so,—that the kidney allows the blood-serum and also albumen to filter through. We then see a series of accidents that we call uræmia; and what I say of the kidneys applies as well to the production of bile and other excretions.

"I take up now the question of intoxication by the alkaloids. In Germany they describe by the name of *botulism* a poisoning of the organism that was observed after the ingestion of putrid meat. This showed itself, like cholera, by diarrhœa, vomiting, algidity, etc., which was evidently brought about by the ptomaines that existed in the bad sausage eaten. This has also been observed in France. We all remember the family that were poisoned by eating stuffed goose. At first a crime was thought of; but it was proved to have been caused by the presence of ptomaines that were found in the goose by M. Brouardel.

"It is the same thing in cholera, of which the cause is no longer the comma-bacilli, as Koch himself now admits. The important fact brought out by M. Gautier is that the animal alkaloids can be produced by the spontaneous acts of life. In 1881 he already announced 'that they appear constantly in excretions furnished by living, healthy animals, as well as in those who were ill.' Later he told us that four-fifths of our disassimilations were veritable internal combustions, comparable to the oxidation of alcohol under the influence of the *mycoderma aceti*.

"A few words more, and I have done. Two scientific commissions, inspired by the doctrine of microbes, went to Egypt to find the microbe that generated the cholera. They both failed. The head of one of them, Dr. Koch, thought, however, that he had found it in the comma-bacillus; but afterwards he said that it did not directly cause the cholera, but that it did it *indirectly* by the intervention of a ptomaine that it secreted. This would imply two suppositions: 1st, one of a ptomaine that he did not show; 2d, the secretion that the baciili gave of a ptomaine, which implies a set of secreting organs to the bacillus! Did any one ever see such a strange accumulation of hypotheses?

"M. Gautier does not merely suppose—he shows that there is a spontaneous formation of leucomaines in the living organism. He shows the formation of these leucomaines by a doubling of the assimilators; he shows the accomplishment of the doubling by the vital action of living cells belonging to the organism, and not by microbes that are foreign to it. He shows also the toxicity of the leucomaines, and, after indicating the genesis of them, he describes their nature and shows them to us.

"Medical men cannot any longer hesitate between this clear and precise doctrine and that of the parasitic doctrine, which is full of cloudy hypothesis. M. Gautier is the first who has demonstrated that we live, at least in part, by putrefaction, and that a part of our tissue can live outside of the action and influence of oxygen. It is not denied that certain maladies are in fact caused by some sort of a germ, and the organism does not create,

for instance, the eruptive fevers, etc.; but gout, rheumatism, diabetes, hunger-fever, pneumonia, and a hundred other diseases seem to have their cause *in ourselves*."

This matter will no doubt cause a good deal of further discussion, and we shall have occasion to refer to it again, as it certainly is of great importance.

Hopeine.—Dr. Dujardin-Beaumetz complains that he has been taken in about hopeine, which had been furnished by American and English houses. In one word, it is a humbug, as on analysis it has been found to be simply morphine which had a slight odor of hops, and the only difference was that morphine sells here for ten cents a gramme, and the so-called hopeine was sold to the confiding doctor at eighty cents a gramme. So the doctor thinks that the interesting work of Williamson on hopeine is simply on morphine, and that he has been deceived by the bad merchants of London and New York.

Diagnosis of Rheumatism by Examination of the Blood.—Professor Hayem, who holds the chair of Therapeutics at the Paris school, has given some notes to the Société Médicale des Hôpitaux on this subject. He says, "For a long time I have been making examinations of the blood in different pyrexias, and every time the diagnosis seemed doubtful I have had recourse to this mode of investigation. Among the various results obtained, I would like to call your attention to this one. Since the works of Andral and Gaveret, it is known that articular rheumatism is accompanied by a considerable augmentation of fibrin in the blood, and in a certain number of patients I have been able to see this augmentation of fibrin even before there was any manifestation of local rheumatism: so that by the examination of the blood I could attribute to its proper origin the fever with which the patient was attacked, and I could diagnosticate in advance the appearance of articular phlegmasia; and in at least one case I think I was enabled to save the life of the patient.

"It was a young man 22 years of age, who had entered the hospital with all the usual characters of grave typhoid,—cerebral symptoms, an evening temperature of 41° C., etc. My interne thought it was a regular case of typhoid fever. As there were several other cases in a ward, he was put with them. On examination, no traces of a lesion could be found in any of his organs, and he had never had rheumatism. Before accepting a diagnosis, I proceeded to an examination of the blood,—when I saw a fibrous reticulum of a most decided character, analogous to that seen only in rheumatism or in pneumonia, so much so that I at once made the diagnosis of rheumatic fever with a determination to the cerebrum, and prescribed at once cold-water treatment. Under the influence of this treatment he rapidly improved, and a few days afterwards an arthritis of the knee was noticed. This symptom was very tenacious, and, notwithstanding the administration of salicylate of soda, it did not terminate for several months, and then left the knee half anchylosed. I think that in this case the treatment prevented the formation of cerebral rheumatism and provoked the appearance of the articular form. So that it is possible to diagnosticate the rheumatic forms of disease by an examination of the blood, even in the absence of any local manifestation."

Memorial to Claude Bernard.—On Sunday last took place the inauguration of a bronze statue of Claude Bernard. It stands on a platform at the top of the steps leading to the entrance of the Collége de France from the Rue des Écoles. The artist has represented the great physiologist standing, with his head slightly inclined, in a meditative attitude, the left arm bent and the right hand on the chin. At his left side is a table, with the trough-shaped box, in which there is a dog, tied down and partly dissected. In front of the table hangs a scroll, on which are written the many discoveries of Bernard, and below it his name. Addresses were delivered by M. Paul Bert, M. Berthelot, and others, on the occasion.

Permanent Dilatation of the Neck of the Uterus.—This process has been put in practice by Dr. Vulliet, of Geneva, for the last year, and it is now adopted at the Maternity Hospital at Geneva. It allows the entire cavity to be seen and operated on daily; at the same time it has permitted Dr. Vulliet to study menstruation in all its phases, and to see in what manner the uterine hemorrhage takes place. He has also been able to take photographs, and even plaster casts, which he presented to the last meeting of the Geneva Medical Society.

To proceed to this dilatation. First put the woman in the genu-pectoral position, with the hips well raised, the peritoneum and posterior walls of the vagina to be then raised as high as possible with a Sims speculum. Then commence the dilatation by introducing, first, urethral sounds from small up to larger sizes, and those that will follow the uterine canal according to its resistance; afterwards put in little wads of cotton that are wet with iodoform, and augment the number of these gradually. These are left *in situ*, as a rule, forty-eight hours. Sometimes, to hurry the dilatation, M. Vulliet used laminaria, that he only left in twenty-four hours, and always followed them with tampons of the iodoform cotton to kill any germs that might have been introduced by the laminaria tents. In proceeding in a regular way, and slowly, one arrives at having a complete dilatation of the neck in about ten days, as a rule, but in some cases it took as much as five weeks, according to the patients.

M. Vulliet employed this method in cases of patients who were suffering with cancer of the uterus and those who were attacked with fibro myoma tumors, and when the neck was entirely dilated he was able to apply different substances on all the surface that was diseased, and it led to good results that could not have been accomplished in any other way; besides, according to Dr. Vulliet, it produced a hyperplastic action that acted very favorably on the uterine tissues. The patients were all improved so that the hemorrhages were stopped, and the fetid odors and loss were also arrested,—a result that is not to be despised. It is more than likely that this process will be put in practice in gynæcology in Europe, and it should be tried in America, where so much that is good in women's diseases has originated.

Differential Diagnosis of Sarcoma and Carcinoma in the Breast.—Not to neglect surgical subjects, let us give the above, which will be a résumé of a clinical lecture given last week at the Hôtel-Dieu by the eloquent Dr. Tillaux, who presents the points in a graphic manner. "We are going to operate to-day upon a woman, 56 years of age, who is afflicted with a tumor in the right breast. She presents almost no history: had a child at twenty-two, and her health had been good, when two years ago she noticed an enlargement of the breast. I think it dates farther back, but, in any case, it now presents the following characteristics. It is as large as the head of a baby; it is exactly circumscribed to the thorax, where it is attached as by a sort of pedicle; the surface is uneven, rough; the skin is red; the consistence is unequal,—it is hard in some places, soft in others; it is quite mobile, rolling on the pectoralis major. I will add that it is indolent, and there is no swelling of the glands in the axilla. It is, then, a real sarcoma, and, as there are some liquid parts in it, we will call it a cysto-sarcoma.

"Being able to show you both varieties,—sarcoma and carcinoma,—I take this occasion to make for you the differential diagnosis between them, as there is often a certain confusion made by those who have studied the old classification of Velpeau. Thanks to modern pathological histology, we can make the distinction aided by clinical facts.

"1. *March and Mode of Development.*—Sarcoma increases much more slowly, particularly at first. It may remain stationary for years; I once operated upon one that Nélaton had been consulted for some twenty-five years before; but when it does once take a start it will grow much faster than carcinoma, owing to the cystic cavities that develop in its interior.

"2. *Exterior Configuration.*—This takes in the form and volume. A confirmed sarcoma is unequal, lumpy on the surface. This is not the little unevenness you will notice in carcinoma, but big lumps as large as a hen's egg, or larger. Then the entire mass in sarcoma is detached in the form of a pedicle, which is not so in carcinoma, as there it is, as it were, flat on the chest. Sarcoma will grow to twelve or fifteen pounds in weight, but you will never see a carcinoma of such a weight.

"3. *State of the Skin.*—In carcinoma the skin becomes rapidly attached to the deeper parts; in sarcoma the adherence is much later. In carcinoma this give rise to a tractus that is seen leaving the tumor and going into the derma, and when the skin is pinched up it gives rise to the sign known as 'orange-skin.' In sarcoma the morbid product approaches the skin and makes it thinner and thinner, just like an abscess that wants to break, and the skin is distended; in carcinoma it is retracted, drawn in, giving rise to the appearance of a quilted cover. In sarcoma the integument is often marked with large veins; this is not seen in carcinoma, but you do see white lines, which Dr. Labbé says are lymphatic varices.

"4. *State of the Nipple.*—In carcinoma the nipple retracts, and the end of the nipple seems to be absorbed. This is not so in the usual form of sarcoma, where it is not modified, except that it may be stretched somewhat.

"5. *General Aspect.*—They both have a tendency to ulceration, but the process is quite different. In carcinoma the skin fuses with the tumor and is destroyed; in sarcoma it gives way only by pressure of the lumps on its internal surface that belong to the morbid tissue. From these facts you will see that the ulcerated surface is quite different: in the carcinoma the border of the ulceration is hard and continues with the tumor, but in sarcoma the border is thin and loose: it is about the same difference that exists between hard and soft chancre.

"6. *Consistence of the Tumor.*—In carcinoma it is hard, or at least firm, while in the other form it is much less so; but, above all, there are soft parts in the sarcoma, and even liquid parts from cysts inside.

"7. *Connection of the Tumor with the Mammary Gland.*—From the first, carcinoma fuses itself with it, while sarcoma will remain distinct from it, so that the gland is not destroyed, but simply flattened and atrophied.

"8. *Connection with Deep Parts.*—Carcinoma will adhere quickly to them, to the pectoralis muscle in particular, but the sarcoma remains apart from them.

"9. *Extension to the Lymphatic System.*—From the first the carcinoma will go to the glands, and the sarcoma hardly ever does so.

"10. *Return of the Tumor.*—Carcinoma will come back much more certainly than the sarcoma, and carcinoma will mostly return at a distance, while the sarcoma will come to the same place.

"11. *Influence on General Health.*—Carci-

noma destroys it quickly, and it is very remarkable to notice that a sarcoma may be operated upon several times while the general health of the patient will remain satisfactory.

"12. *Symptoms.*—Carcinoma is generally painful, and sarcoma indolent.

"13. *Rules for Operating.*—In sarcoma, even the smallest, take away a portion of the healthy part also. I used to content myself with simply extirpating them, but I now recognize that it is bad practice; it is not needed to sacrifice all the gland, but to pass well over the limits of the tumor. Again, it is possible, as you will see me do to-day, to measure beforehand a flap of the skin and cover the wound completely and get a reunion by first intention. This cannot be done in carcinoma, owing to the alteration of the skin itself."

In closing, let me give a formula that Dr. Guibout gives to stimulate the action of the digestive organs and increase appetite:

℞ Sulphate of strychnine, 0.02 gramme;
Syrup of mint, 30 grammes;
Distilled water, 150 grammes. M.
S.—Tablespoonful before meals.

THOMAS LINN, M.D.

PARIS, FRANCE, February, 1886.

BALTIMORE.

THE commencements have been held, and about two hundred and fifty new-made doctors have been added to the medical population of the country by the Baltimore medical schools. Of late years Baltimore has become somewhat of a medical centre, and several new schools have been started to compete with the two older institutions for the patronage of the students who come here for their medical education. The older schools hold their own pretty well, however, as is shown by their graduating classes, which numbered one hundred and forty-six in the College of Physicians and Surgeons and seventy-eight in the University of Maryland. The medical department of Johns Hopkins University is not yet a factor in the competition, although the influence of this great school is already manifesting itself in the greater attention bestowed in the medical schools to what may be termed the scientific branches of study,—namely, anatomy, physiology, chemistry, and pathology. Only a few years ago, didactic lectures and occasional recitations constituted the only means of instruction in chemistry and physiology, while pathology was scarcely thought of as coming properly within the curriculum. Now, practical laboratory instruction in chemistry, physiology, the use of the microscope, and urinary analysis is obligatory in at least one of the schools mentioned, and demonstrations of gross and microscopic pathology are regular features in the course.

A case of Raynaud's disease was recently reported to one of the societies by Dr. A. B. Arnold. The patient had lost the last two phalanges of the index-finger and the terminal phalanx of the ring-finger of the right hand. On the left hand the terminal phalanx of the thumb was absent, and the same phalanx of the little finger was preparing to drop off. No pain attended the spontaneous amputation of the fingers. Nothing is positively known about the etiology or pathology of the affection. At first sight one is led to think of leprosy; but the other symptoms of that formidable disease are absent.

The question of the occurrence of cancer of the uterus in the negro was lately up for discussion in the Clinical Society. A case of cervical epithelioma was reported by Dr. R. M. Hall, who referred to the rarity of the disease in colored women. Some practitioners of large experience in the South have stated that they never saw a case. The discussion brought out the fact that cancer of the uterus was far from rare among colored women, although less frequent than among whites. I may say, however, that the degree of dilution of the negro blood in the individuals affected was not alluded to. In other words, no case was reported in which cancer was observed in women of pure negro blood.

Dr. Kierle pointed out the difference in the clinical history between carcinoma beginning in the glands and true epithelioma or surface-cancer. In the former there was usually much discharge of an offensive character, frequent hemorrhages, and much sloughing. In the flat or epithelial cancer, on the other hand, the infiltration is very superficial, the tissues are gradually eroded, there is little discharge, and the supposed characteristic offensive odor of cancer may be entirely wanting. Speaking as a pathologist, he would regard the prognosis in the latter form as much more favorable, and promising probable immunity against recurrence after extirpation.

Dr. Waters, a short time since, read a paper on "Endermic Medication" before the Clinical Society. Several old-fashioned remedies which have gone much out of use were considered. He spoke highly of the value of blisters applied to the inflamed skin in erysipelas until vesication results; then puncturing the bullæ and applying a cataplasm of bran and yeast. The effects are uniformly good. He also uses blisters with success early in the treatment of pneumonia, and thinks the reluctance on the part of many medical men to employ them in this disease is a mistake and much to be deplored.

Another old-time remedy which has fallen into undeserved desuetude is the lead-and-opium lotion. In superficial and deep inflammations or congestions it frequently gives

very prompt relief. In the erythematous hyperæmia of stumps after amputation, which not rarely becomes erysipelatous, the application of the lead-and-opium lotion speedily subdues the redness and tension.

In the treatment of the diseases of children where quinine is necessary, it is often inconvenient or impracticable to use this remedy, on account of its intense bitterness. In these cases Dr. Waters applies the quinine endermically, dissolving it in whiskey and rubbing it into the integument along the spine. He has used it in the same manner in adults, and with the most gratifying success.

At the Baltimore Medical and Surgical Society, on the 25th, Dr. Brinton reported a fatal case of chorea. The patient was a boy of twelve, who had rheumatism complicated with endocarditis and followed by chorea a year ago. He recovered from this attack under arsenic, but a month ago the boy was again seized with chorea, which proved fatal in a week. There was high temperature and incontinence of urine and fæces for some days preceding death.

The annual report of the "Thomas Wilson Sanitarium for Children" has just been published. From this it appears that during the last season (from June 15 to September 18) 2960 mothers and 4234 children, most of the latter being sick with some form of summer-complaint, availed themselves of the benefit of this noble trust. The Sanitarium, as I have explained in a previous letter, is located on the Western Maryland Railroad, ten miles from the city. Tickets are furnished through the physicians attached to the dispensaries throughout the city, and are limited to children under five years of age and their mothers. Contagious diseases are not received. When children are seriously sick, they may remain with their mothers at the Sanitarium until improved or cured. One hundred and fourteen children and seventy-five mothers were thus fed, lodged, and treated at the Sanitarium last season. Three cases of follicular enteritis and two cases of gastro-enteric catarrh died. One of these had general tuberculosis, and one hæmophilia.

The physician in charge, Dr. W. D. Booker, speaks favorably of the effects of irrigating the bowels with warm water in both of the diseases mentioned. For the restlessness and sleeplessness which are so frequent in cases of gastro-enteric catarrh, he found bromide of sodium, either alone or combined with chloral hydrate, very useful. G. H. R.

PHENOL, CHLORAL, AND WATER.—A. Bouriez states that when phenol and chloral are mixed in such proportions that the quantity of the former does not exceed 1.7 parts for every 1 part of the latter, a liquid is formed which is soluble in water in all proportions.

PROCEEDINGS OF SOCIETIES.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held March 10, 1886, T. MITCHELL PRUDDEN, M.D., in the chair.

ABSENCE OF TESTICLE.

Dr. HODENPYL presented specimens removed from the body of a man aged 28 years, who died with the lesions of chronic phthisis. The other lesions were normal, except that there was marked phimosis, a very small penis, entire absence of the left testicle, and only a rudimentary right testicle of the size of a small almond. The right epididymis was small. The tunica vaginalis was present on both sides, as was also the spermatic cord, the cord on the right side terminating in the rudimentary testicle, while that on the left side grew smaller and gradually disappeared below the external ring. Microscopical examination showed all the elements of the cord.

RAPID RECOVERY FROM TENEMENT-HOUSE LAPAROTOMY.

Dr. H. J. BOLDT presented an ovarian cyst about the size of an orange, removed from a woman 41 years of age, the diagnosis having rested between hydrosalpinx and an ovarian cyst which had not yet risen above the pelvis. The patient got out of bed on the ninth day after the operation, although it had been performed in unfavorable surroundings. There was also complete recovery from previous symptoms. No adhesions were found, and it was worthy of remark that the earlier an operation was performed in these cases the less likely would there be adhesions. The dangers of tenement-house laparotomies were not so great, he thought, as to contra-indicate their performance when the patient was unable to pay for a bed in the hospital. He had lost only two cases out of eight within the past few months. He further remarked that there were some cases in which ether produced danger from uncontrollable vomiting, and here he considered it advisable to substitute chloroform.

ENLARGEMENT OF THE PROSTATE, CYSTITIS, AND PYELONEPHROSIS.

Dr. ROBERT NEWMAN presented the specimens, and said the chief point of interest was that they illustrated the fact that cystitis was less frequently the cause of death than we might suppose; that, as in this case, disease of the kidneys was what killed the patient.

SUBPERITONEAL FIBROID.

Dr. H. MARION SIMS presented a small specimen removed from a woman 24 years of age, who had suffered a number of years with

the pain and symptoms accompanying a subperitoneal fibroid. Her sufferings became so great that laparotomy was performed for the purpose of removing the ovaries, when the small subperitoneal fibroid situated in the folds of the broad ligament was discovered and removed. The uterine fibroid had increased the size of the womb fourfold.

NEUROMATA OF THE ABDOMINAL PARIETES.

Dr. SIMS also presented a number of little tumors about the size of a bean, which he had removed from the anterior wall of the abdomen, from just beneath the integument, in the case of a young lady who gave the following history. She was quite healthy until her marriage at the age of seventeen. On returning from her wedding-tour she had become a nervous wreck. An operation for the relief of vaginismus was performed, after which pain disappeared during three or four months. She then became pregnant, and during the second month of pregnancy pain developed in the region of the left ovary and increased in severity, terminating in repeated hystero-epileptic attacks. Her symptoms became worse, instead of better, after delivery, and both ovaries were then removed, and were found to have undergone cystic and inflammatory change, the left ovary being three times its normal size and containing four or five cysts; the right ovary had undergone similar, but less marked, change. The patient was able to sit up at the end of three weeks, and for the first time was free from pain and convulsions. But, about two weeks later, she began to complain of pain at certain small spots over the abdomen. Dr. Sims found, on careful examination, little bodies about the size of a pea situated just beneath the integument. These were removed under the influence of cocaine, and all pain ceased. Some days later, however, the pain returned, and other nodules were found and removed, followed by complete relief. She had had no pain since the last operation. Incomplete examination of the specimens pointed to neuromata.

PERTUSSIS, PNEUMONIA, ENLARGEMENT OF THE MEDIASTINAL GLANDS, CAUSING PARALYSIS OF THE RECURRENT LARYNGEAL NERVE BY PRESSURE.

Dr. PUTNAM JACOBI presented the lungs of a child which died aged 2½ years. The child was said to have had pertussis about eight weeks before it was brought to the dispensary, and about three weeks previously it became unable to walk, apparently from weakness and not from paralysis. The physical examination pointed to atelectasis of the upper portion of the lung rather than of the lower lobe, as more commonly occurred in pneumonia; and another interesting feature, in the light of the autopsy, was the absence of fever. The child became unable to speak or cough above a whisper. Careful examination was made to discover enlargement of the glands in the neck and chest; but no physical evidences of such enlargement were recognizable, although a certain lividity of the lips led to a suspicion of its existence. The child improved for a short time under treatment, and then died suddenly. The autopsy showed pneumonia, with a large amount of pus in the left lung. The lymphatic glands in the chest were enlarged. One of these glands, lying between the aorta and trachea, had apparently produced paralysis of the left recurrent laryngeal nerve by pressure, which would account for the aphonia. The cause of sudden death, she thought, was a minute coagulum entwined about the cardiac valves, but not entirely occluding the orifices.

PERITYPHLITIS.

Dr. J. J. REID presented a specimen removed from a woman who entered the hospital complaining of pain in the iliac region. A swelling was found in the gluteal region, and a hypodermic needle was introduced, but no pus was withdrawn. Dr. Reid next saw the patient two or three days later, when the tumor had pointed near the crest of the ilium and pus escaped. Peritonitis developed, and the autopsy showed that there had been perityphlitis, with two perforations of the cæcum. A quince-seed was found in the vermiform appendix. The interest in the case centred in the fact that, as was shown at the autopsy, had an incision been made sufficiently early at the crest of the ilium, the finger might have been passed down to the cæcum.

SEPTICÆMIA FOLLOWING THE INTRODUCTION OF A URETHRAL BOUGIE.

Dr. R. VAN SANTVOORD presented specimens removed from the body of a man aged 73 years, who was admitted to Randall's Island Hospital December 2, 1885, suffering from a deep urethral stricture of small size. The house-physician passed a urethral bougie, which was followed by a chill, pains in the back, loins, etc., but there was no fever until after the second day. There then developed fever, vomiting, headache, diminution of urine (which continued to contain albumen), stiffness of the neck, pains in the joints, a soft systolic murmur over the apex (not transmitted), subcrepitant râles over both pulmonary lobes. The patient died on the eighth day after the introduction of the bougie, having had the last two days of his illness the symptoms of cerebro-spinal meningitis. The autopsy showed slight atrophy of the brain, slight atheroma of the basilar vessels, slight surface-œdema, some hemorrhagic spots. The lungs were œdematous and congested; the left pleural cavity contained two ounces of clear fluid; the posterior border of the right lung was bound down.

The heart was normal in size; the aortic and mitral valves showed patches of recent fibrin, that on the aortic extending down a little distance on the endocardium; there was some hemorrhage into the endocardium, showing that the process was an acute one. The spleen and kidneys showed infarctions. The pelvis of the kidneys and the ureters were not affected. There was a marked hardening of the urethral canal at the membranous junction. The joints which were opened revealed no visible lesion.

The points of interest in the case were, first, that the introduction of the urethral bougie seemed to have given rise to the septic process, although it was introduced by a careful house-physician; second, that the process skipped the ureter and passed up to the body of the kidney; third, that two or three days elapsed before the beginning of the continued fever, which then lasted six days; fourth, the symptoms during the last two days of life were those of cerebro-spinal meningitis. The cardiac lesions had no apparent connection with the murmur heard during life.

He asked Dr. Prudden whether he had seen the septic inflammation skip the ureter and pass up to the kidneys.

Dr. PRUDDEN replied that he had in six or seven cases.

Dr. PRUDDEN then presented a specimen of

CARCINOMA OF THE CERVIX UTERI,

involving the walls of the bladder, causing complete occlusion of one and partial occlusion of the other ureter by pressure, ending on one side in pyenephrosis, and on the other in pyelonephritis.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held March 18, 1886, the President, A. JACOBI, M.D., in the chair.

THE TREATMENT OF DIABETES.

Dr. F. A. BURRALL read a brief paper on this subject, which he divided into three heads,—namely, the dietetic, the hygienic, and the medicinal management of diabetes. Under the dietetic management he referred to the diet-tables prepared by different authorities, as Pepper, Flint, and others. Some recent writers had added to the list watermelon and buckwheat-cakes. He had employed glycerin in one case, giving two ounces alternate days, and the result was that during its administration the sugar in the urine was increased, and when discontinued the sugar was diminished. Some articles were absolutely injurious, others were harmless, but no absolute diet-list could be laid down, and the patient's food should never be so restricted as to produce mal-assimilation and starvation.

It was not necessary to dwell upon the hygienic treatment, and regarding the medicinal treatment there was a long list of drugs which had been employed, and they were difficult of classification. Nervines and antifermentatives occupied a prominent place. Dr. Burrall had not tried medicines without regulating the diet at the same time, and he was unable to say positively what benefit had been derived from medicinal treatment in the cases under his own observation.

Dr. CAULDWELL read the histories of four cases of diabetes, and referred to two others, in which he had employed the new so-called specific and accepted East Indian diabetic cure, jambol. Four of the cases were well-marked chronic diabetes. Of the six cases, in four marked benefit followed the use of the drug, but this benefit was undoubtedly due in a large measure to diet and improved surroundings. In the other two cases no effect followed. In one case the drug caused palpitation and fulness in the head, and in one healthy person it apparently produced an urticaria. It was given in five-grain doses four times a day to two healthy adults, and the urine was not affected in any way.

Dr. W. H. DRAPER also read a brief paper on the same subject, and said that, excluding the dietetic treatment of diabetes, it might truly be said that our treatment of this disease was as purely empirical as was our knowledge of its pathology speculative. No tests of drugs alone, without the more or less complete exclusion of saccharine and starchy foods, had been made in the treatment of this disease. His experience led him more and more towards the conviction that dietetic and hygienic means were, after all, the essential factors in the successful management of the disease. Perhaps the larger portion of the cases reported were of the benign form, being apparently due only to a want of power to assimilate the sugars and starches. But it was the grave cases, those which he had observed to occur usually in persons who had received some serious nervous shock, or in whom there were evidences of tissue-degeneration, which were the ones to test the efficacy of remedies. But, unhappily, they had thus far remained uncured, though they were often ameliorated by drugs. The drugs which he was most accustomed to rely upon were opium (usually in the form of codeia), sulphide of calcium, and the alkaline carbonates. Opium he considered a great boon, and in mild cases, with regulated diet, it would probably cure the disease. He had found sulphide of calcium a useful adjunct in the treatment, with regulated diet. Alkaline carbonates had been, in his hands, very useful in some cases.

DISCUSSION.

Dr. T. A. MCBRIDE opened the discussion, and said his attention had been directed specially to this subject since 1884, when Professor Segan, of Vienna, described his method for de-

tecting a small quantity of sugar in the urine. He employed blood-charcoal as a filter, afterwards washing it out with distilled water, and the second or third washings would be found to contain sugar on using Fehling's test. This method revealed much smaller quantities of sugar than Fehling's test alone,—the amount varying from a trace, or one-tenth per cent., up to two and a half per cent., but usually the latter amount was revealed by the unaided Fehling test. Dr. McBride said sugar was found in the urine in apparently healthy persons, also in various affections, especially of general nervousness, neurasthenia, etc. Indeed, it was difficult to say where diabetes began and where it ended, for very small quantities of sugar in the urine were sometimes accompanied by the definite symptoms of undoubted diabetes.

Dr. F. P. KINNICUTT said that many years ago Lauder Brunton had called attention to the fact that sometimes the precipitation of the oxide of copper by Fehling's test fails to take place, although sugar may be present in large quantities. This peculiarity has been found most frequently in urine presenting a purplish hue on the addition of cold nitric acid. Such urine might yield the red oxide of copper precipitate if diluted, and it would probably result also from the blood-charcoal test described by Dr. McBride.

Dr. R. M. PAGE said there were three conditions in which sugar might appear in the urine. The first was, as had been shown by Dr. Fowler, after eating an excess of saccharine food. In the other two the sugar was present more or less continuously,—in the one instance being of large quantity, in the other of small quantity, but in both being the result of diabetes mellitus. The cases in which there was a break in the presence of sugar were much more favorable than the others. Niemeyer had stated that three cases of diabetes occurred in men to one in women, and usually from thirty to forty years of age; but Dr. Page had found it more often in women, and usually after the fiftieth year. With regard to treatment, he had no faith in drugs.

Dr. GEORGE B. FOWLER, in 1877, accidentally discovered that an excess of saccharine food, especially on an empty stomach, was followed by sugar in the urine, and he had repeatedly observed this fact in healthy persons since that time.

Dr. W. H. DRAPER had ceased to attach very much importance to the occasional presence of a very small quantity of sugar in the urine, for the reason which had been well stated by Dr. Fowler. He found it very often in that condition of the urine which obtained in the lithæmic state,—that is to say, in that variety of dyspepsia in which we found in the urine the evidence of suboxidation; and the treatment which would cause the disappearance of the urates and crystalline sediments of uric acid would also cause the disappearance of the small quantity of sugar. He thought, with Dr. McBride, that it was difficult to say where diabetes begins. We find small quantities of sugar in the urine frequently, and in persons who may be suffering from the same symptoms which are present in those who pass urine containing a larger quantity of sugar. Therefore a mild form of diabetes seems to be nothing more than a form of indigestion.

Dr. DEVLIN called attention to the statement which had been made that nitrous-oxide gas inhalation was sometimes followed by the presence of sugar in the urine.

Dr. E. DARWIN HUDSON, JR., said that chloroform-inhalation and ether-inhalation are sometimes attended by sugar in the urine, and he could easily believe that nitrous-oxide gas might produce the same result. Whooping-cough, the convulsions of childhood, and spasmodic asthma are sometimes followed by sugar in the urine, due probably to some impression upon the nervous centres related to the glycogenic function.

The PRESIDENT said he would make a statement which it was probable all present could confirm,—namely, that sugar in the urine to the amount of being revealed by the ordinary Fehling test was sometimes not of much significance. He had known persons in fair health to have sugar in the urine at times through a period of ten or twelve years. As a rule, such persons were beyond the middle age. Cases of diabetes with urine of a specific gravity of 1.035 down to 1.017 were not infrequent. These were not always mild cases, and they often led on to phthisis. A number of such patients were gouty, and when in good health their urine might contain no sugar for weeks, but during a gouty attack or a state of poor health sugar would be present to the extent perhaps of producing pruritus pudendi. Such patients when they had an acute disease were in great danger, particularly if it were a pulmonary disease. As a rule, such patients did not live through an attack of pneumonia. Such a case was that of a physician, 42 years of age, who had no sugar in the urine for six years. During the first of his illness with pneumonia he was doing fairly well; then he became thirsty, and examination of his urine at his bedside revealed sugar, when he said, "Now I will go;" and he went. Dr. Jacobi spoke of a family of four brothers, all of whom had sugar in the urine, but those who obeyed the physician's instructions had only a trace, and remained in good health. One of those who refused to be so guided was now affected with phthisis.

Dr. DADIRRIAN had employed matzoon, or fermented milk, with advantage in the treatment of diabetes, and also in a great many other affections.

Dr. DAWBARN said that in a personal interview with Dr. Husted that gentleman said he had yet had practically no failure with the

sulphide of calcium in the treatment of diabetes, but it was necessary to continue it a long time, and Merck's was the only preparation which he had found effective.

Dr. WEIR had within a short time seen three cases of gangrene in diabetes. In one he removed the gangrenous fingers, in the other the patient died before demarcation formed, and in the third he refused to amputate because the middle portion of the lower extremity was affected, and the limited statistics of such cases showed a fearful mortality after amputation. It might be said, in connection with the President's remarks, that this patient had recovered from an attack of pneumonia, but the gangrene of the thigh occurred afterwards and resulted fatally.

Dr. SIMON BARUCH attached importance to exercise in diabetes.

Dr. DRAPER thought forced exercise was very capable of abuse, and should be very guardedly advised in the severer forms of diabetes.

Dr. KINNICUTT knew of a recent amputation for gangrene of the thigh in a diabetic patient which resulted fatally. In three other cases, he thought physical fatigue had been the cause of diabetic coma.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, MARCH 22, 1886.

The President, DANIEL LEWIS, M.D., in the chair.

THE RELATIONS BETWEEN DISEASES OF THE SKIN AND DISORDERS OF OTHER ORGANS.

DR. L. D. BULKLEY in his paper said that, although comparatively little was to be found in literature regarding this subject, the close observer must have noticed cases of skin-disease existing at a time when there was disorder of other organs, and in which the relationship between the two conditions was that of cause and effect, or cases in which the diseases must have had the same cause. In illustration of his subject he read the letter of a young lady who graphically described her sufferings, which letter first suggested to him the idea of writing a paper on this subject.

The lecturer considered the relation between skin-disease and disorders of other organs under six heads: 1, the relation of skin-disease to digestive disorders; 2, to nervous disorders; 3, to circulatory disorders; 4, to sexual disorders; 5, to general conditions, as anæmia and debility; 6, to special conditions, as malaria, gout, and rheumatism.

A most striking relation was observed to exist between digestive disorders and urticaria. Such relationship was also manifest in acne, eczema, and likewise in syphilis, in which specific treatment sometimes fails until after improvement of the digestive system.

The relation between nervous disorders and diseases of the skin was observable in a variety of affections. The value of arsenic in skin-diseases is probably largely attributable to its influence upon the nervous system. Skin-lesions of most diverse forms have been observed to follow nervous exhaustion, nervous shock, lesions of the nerves, etc.

Functional disturbances of the circulation are frequently connected with disease of the skin, especially in acne, also in hemorrhoids, purpura, etc.

The relation between disorders of the sexual organs and diseases of the skin was observable in herpes gestationis, pruritus confined to the genitals during pregnancy, chloasma, acne rosacea, and skin-lesions following disordered menstruation and masturbation.

That there is a relation between the general conditions of anæmia and debility and skin-diseases is plain to every one, and we often find that local treatment fails to relieve the skin-disease, which, however, disappears at once upon improvement of the general condition.

Coming to the relation of special conditions to skin-diseases, Dr. Bulkley said that while it could scarcely be claimed that malaria is the direct cause of any single skin-disease, yet its indirect relationship seems evident, and may naturally be inferred from the influence of this poison upon the liver. He had seen cases of eczema in which the eruption appeared at certain periods, and which were cured by the administration of quinine. In many instances eczema is found to alternate with gouty symptoms. He had seen an association between rheumatism and erythema papulatum.

DISCUSSION.

Dr. CHARLES HEITZMAN, being invited to open the discussion, said that there were no important points in which he differed from the author. A few years ago, however, Dr. Bulkley had read a paper in which he claimed a causative relation between disease of the kidneys and liver and certain skin-diseases, as eczema about the genitals, and Dr. Heitzman strongly opposed those views. The nature of the subject of this evening was altogether different. While he had been educated in the Vienna school years ago, he still recognized the fact that there certainly were many disorders of the skin dependent upon internal disease. He thought Dr. Bulkley was quite correct when he said parasitic disease of the skin, as favus, was entirely a local affection.

Dr. JACKSON thought that, while many skin-diseases were due solely to a local cause, there were also many cases in which they were plainly attributable to disorders of other organs. He instanced eczema and acne rosacea.

Dr. J. L. CORNING thought the discussion taught us to lay hold of the positive indications as far as we could, and where we could not do so to take hold of the collateral, and by ameliorating general symptoms hope to better the skin-disease.

Dr. ALLEN was not one of those who believed that a parasitic disease was constitutional, but he differed from Dr. Heitzman in that he believed a suitable soil, arising from a low condition of the general health, was necessary before the parasite would take hold; for example he cited favus. He did not think it always necessary to look to disorder of an internal organ for a cause of the skin-disease. He had cured an eczema of the upper lip after treating a nasal catarrh when remedies previously used had failed. In pruritus of the genital organs we should examine the urine for sugar.

Dr. ALEXANDER HADDEN had seen two or three cases in which urticaria was dependent upon malaria, the skin-eruption disappearing with the chill. He also had four or five cases of eczema of the vulva dependent upon diabetes, eczema disappearing with the diminution or disappearance of sugar in the urine. Urticaria was often dependent upon some intestinal disturbance, and was usually relieved in his practice by a mercurial cathartic.

Dr. BULKLEY, in closing, said he believed a parasitic skin-affection would not take root in many persons in the audience. In other words, a person in perfect health would not have favus. This being the case, he expected to get the best result from the treatment of this disease by the administration of internal remedies, or remedies for the improvement of the general health. Dr. Allen had called attention to an important fact,—namely, the relation between eczema of the upper lip and nasal catarrh, and between pruritus of the vulva and sugar in the urine. Dr. Bulkley had treated of the subject, as it was a very large one, merely in a general way, and for the purpose of calling general attention to it.

THE INJURIOUS EFFECTS OF HIGH TEMPERATURE ON THE PUBLIC HEALTH OF THE CITY, AND THE MEASURES FOR THEIR PREVENTION.

Dr. STEPHEN SMITH read a portion of a paper in which he considered especially the beneficial influence of trees and vegetation and of rain (or washing the streets) and cleanliness upon the health during the summer months. Statistics show that not far from three to five thousand persons die annually in New York from agencies engendered by the heat of the summer. The injurious influences of heat are particularly noticeable in diarrhœal diseases, in zymotic diseases, and in debilitated subjects. There are especial conditions in New York favoring an increased temperature over the neighboring districts during the summer months, such as the very dense population, the masses of brick and stone in the buildings and streets (the height of buildings preventing free circulation of the air), the absence of vegetation, the presence of gases in the atmosphere, and the southern exposure.

The means for reducing to a minimum the injurious effects of hot weather upon the health were the planting of trees in the streets, the flushing of the streets and gutters daily, and also the establishing of baths in the centre of the city in addition to those along the river-front.

Dr. Smith urged the necessity for some legislation providing for the planting and protection of trees in the streets and avenues of the city, and read a proposed bill, drawn up with the aid of a lawyer, empowering the Park Department to expend a sum not exceeding twenty thousand dollars annually in planting such trees as would grow and were best suited to meet the indications.

The proposed method for flushing the streets was by salt water from the river, which would result not only in cooling off the atmosphere and rendering it refreshing, as after a rain-storm, but also in cleansing the streets. Indeed, it was the only method by which the streets could be properly cleansed. This department would be placed under the control of the Fire Department, who would have a more efficient method of stopping conflagrations, and would at the same time replace the scavengers of the streets by flushing the streets night and morning with salt water. The entire cost of establishing this system had been estimated by competent engineers at four millions of dollars. Here, doubtless, as in Liverpool, the use of the water by business establishments would in a few years pay off the first sum invested, and leave a permanent income to the city.

Dr. JOHN C. PETERS favored the proposed legislation, but he doubted whether sufficient room could be found in the streets for the growth of large trees. Many of the streets were not sufficiently wide for a row of trees in the middle, and the ground under the sidewalks was commonly excavated for coal-cellars.

Dr. W. M. CARPENTER said that in Paris they flushed the streets daily during the period when cholera was feared, and the result was to cleanse the streets and to render the atmosphere very fresh, as after a summer shower. The contrast between the cleanliness of the streets and the freshness of the atmosphere as he had found it during his stay in Paris and as it existed in New York was very great, and certainly did not speak in favor of that of New York.

Dr. L. D. BULKLEY confirmed the statements of Dr. Carpenter.

On motion, the Society approved of action being taken by the Committee on Hygiene to have the State Legislature pass a bill or bills providing for the planting of trees in our

streets, and for flushing the streets and public places of the city with salt water.

The PRESIDENT announced the death of Drs. Gaspar Griswold, Austin Flint, and S. O. Van der Poel, of whom memorials would be read at a future meeting.

REVIEWS AND BOOK NOTICES.

A TREATISE ON AMPUTATIONS OF THE EXTREMITIES AND THEIR COMPLICATIONS. By B. A. WATSON, A.M., M.D., Surgeon to the Jersey City Hospital, to St. Francis and to Christ Church Hospital. Pp. 750.

This very valuable and extensive work necessarily considers many of the questions of surgery. The first chapter is mainly devoted to the history of amputations, and, like the rest of the volume, bears on every page the evidences of close study and exhaustive research. It is so pleasantly written, and contains so much unfamiliar surgical history, that we found ourselves spending much more time in its perusal than we had proposed.

In the control of hemorrhage in amputation of the thigh, of which the author gives an interesting *résumé* of methods and their histories, he neglects to mention that the first to suggest and publish the practicability of controlling the circulation through the rectum by direct compression of the iliac vessels was Dr. Frank Woodbury, of Philadelphia, who published his suggestion in the *American Journal of the Medical Sciences* in 1872.

We consulted with much interest the article headed "Conditions Requiring Amputation," and, though we find it much fuller and more complete than most similar articles in most of the text-books, it is still unsatisfactory.

We well remember the difficulty we experienced when first called to treat serious compound fracture. Was it a proper case for amputation or not? None of the books give a young surgeon the information he seeks. Perhaps the most satisfactory way would be for a writer to cite the exact injury or injuries in a series of cases in which amputation had been performed, and a series which recovered without amputation.

We notice in the same chapter a valuable suggestion of Dr. Watson,—that, in cases in which the surgeon is doubtful if amputation is demanded or not (and, we would add, those in which the patient and friends at first forbid amputation), the injured limb be dressed with strict antiseptic precautions, which, if successful, very much modify or entirely prevent that stage known as the intermediate, so that if amputation be at last decided upon there need be no delay in waiting for the secondary period, but the operation can be performed at once.

It is almost unnecessary to state that Dr. Watson consistently employs antiseptic precautions in his operations.

He devotes many pages to the "Germ Theory," and describes, mostly by quotations, various methods of dressing wounds, including Lister's method of using carbolic acid, O'Halloran's open method, Guérin's cotton-dressing, the earth-treatment, etc. But we fail to find the method the author himself prefers, nor do we find any mention of the use of corrosive sublimate, the antiseptic probably the most generally used at present.

Indeed, we think, if there be a fault in this magnificent work, it is that the author quotes too much, and leaves himself too much in the background. The doctor has had a large experience, and the result of it would be very valuable to the profession. We hope in the next edition to have more of the author himself.

J. M. B.

THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE EAR. By OREN D. POMEROY, M.D. With One Hundred Illustrations. Second Edition, revised, with Additions. New York, D. Appleton & Co., 1886. 8vo, cloth, pp. 413.

The scope of the present work is the pathology, diagnosis, and treatment of diseases of the ear, in a form easy of reference to the general practitioner and the young aural surgeon. It is clear, plain, and positive in its teachings, and is a safe guide in practice. Diseases of the naso-pharynx and other disorders affecting the hearing receive due consideration.

NEW REMEDIES AND CLINICAL NOTES.

TUBERCULAR MENINGITIS CURED BY IODOFORM.—A Swedish physician, Dr. Emil Nilsson, alleges that he has cured an undoubted case of tubercular meningitis by frictions on the shaved scalp with iodoform ointment (one to ten). The patient was a boy, aged 8, whose mother had a family history of phthisis, and four of whose brothers and sisters had died from tubercular meningitis. The symptoms in this child's case were similar to theirs,—headache, torpor, convulsions, strabismus, and pyrexia. He was at first treated with calomel and iodide of potassium, but did not improve, and after having been under treatment for a week became distinctly worse, being unable to take food or medicine. The pallor of the face which had pre-existed gave way to flushes of the cheeks. The child threw himself out of bed, and presented several clonic spasms of the limbs and of the facial muscles. The head was then shaved, and iodoform ointment rubbed in, an oil-skin cap being put on. The friction was repeated

three or four times in the day, and the next day there was a decrease in the convulsive movements, the sleep was calmer, and the spasmodic contractions which had previously been excited by the slightest noise now ceased to be so. Consciousness shortly afterwards returned, and the child's face became of a more natural color. This, however, was accompanied with a severe coryza, redness of the lips, and an irritable cough, the breath smelling strongly of iodoform. The ointment was discontinued, and syrup of iodide of iron given. The unpleasant symptoms rapidly disappeared, and the child was soon running about in good health.—*Therapeutic Gazette*, January, 1886.

The Treatment of Gonorrhœa by Iodoform.—Dr. Alexander V. Khrül, of Irkutsk, recommends (Proceedings of the Eastern Siberian (Irkutsk) Medical Society, 1885, p. 34) the treatment of gonorrhœa after the method of Dr. Watson Cheyne (described in the *British Medical Journal*, 1881), somewhat modified, which he has sucessfully practised about two years. An ointment made of one part of iodoform and ten parts of vaseline is somewhat liquefied by heating and then aspirated (by suction) into a fine elastic catheter, the latter being anointed externally with the same mixture and introduced into the urethra to the depth desired. The ointment is blown out of the catheter by the operator's or patient's mouth, applied to the free end of the instrument. The advantages claimed for this plan by the author, on the ground of seventeen cases, are as follows:

1. It enables even deeper parts of the urethra to be subjected to the direct action of the iodoform.

2. While covering the urethral walls, the ointment gives them sufficient protection against any irritating influence of the urine.

3. The method enables us to get rid of internal administration of balsamic drugs, which are injurious, being apt to produce renal pain, albuminuria, and nephritis.

4. On the other hand, it enables one also to get rid of the treatment by watery injections, which do not allow any prolonged contact of the medicaments with the diseased mucous membrane.

5. The ointment produces a strikingly rapid narcotic and disinfectant action, the painful phenomena of the acute stage disappearing within twenty-four hours.

The method is especially indicated in persons with irritable urethra and kidneys. The single drawback is the necessity of aspiring and insufflating the ointment by the mouth, which procedure may appear rather unattractive even to not over-fastidious people. However, it might be replaced by the use of an india-rubber contrivance.—*London Medical Record.*

Excessive Vomiting of Pregnancy instantly relieved by Ether-Irrigations upon the Epigastrium (Mendel, *Archiv de Tocol.*, September, 1885).—A young woman, primapara, of feeble constitution, had frequent vomiting since the second month of pregnancy. At the fifth month the vomiting became more persistent, and was accompanied in the intervals with nausea, fainting, and general malaise. In a few hours the attacks became so frequent that they succeeded without interruption, producing syncope, absolute prostration of power, noises in the ears, chills, cold and profuse sweats, frequent and filiform pulse. Her life was manifestly in danger. Means the most varied to arrest this vomiting had been employed without result. In their turn antispasmodics had been used (ether, valerian, musk), then opiates, choral, carbonated and iced drinks, iodine (internally and externally), blisters upon the epigastrium, hypodermic injection of morphine, ether, etc. Ultimately irrigation of ether upon the epigastrium was tried. The effect was instantaneous. A single irrigation sufficed to cut short the vomiting. The patient drew a few long breaths, said she was cured, and felt perfectly well. Later the vomiting returned twice, and each time the ether-irrigations arrested all trouble. —*Edinburgh Medical Journal.*

Oxygen-Inhalation in Eclampsia.—In the *Russkaia Meditz.*, No. 32, 1885, p. 595, Dr. Schmidt, of St. Petersburg, records a case of severe eclampsia occurring in a relative of his after a twin-labor, where he successfully used oxygen-inhalations. When first seen, the patient was found in a deeply unconscious and nearly asphyctic state: to prevent the convulsive attack, she had been constantly kept under the influence of chloroform by two medical attendants. It was the asphyctic state which suggested to the author to try oxygen-inhalation without any delay, and in spite of some reluctance shown by his colleagues. After a few inhalations the patient gradually recovered her consciousness, though she could not at first speak, on account of her tongue being swollen in consequence of bites during the paroxysms. Shortly afterwards she took some tea, and was understood to complain of pain in the tongue and of general weakness. The patient made a slow but complete recovery. About one cubic foot of the gas was used. The case came under the author's observation several years before the publication of Lashkevitch's paper on oxygen-therapeutics.—*London Medical Record.*

When to Tie the Umbilical Cord (Engel, *Centbl. für Gynäk.*, No. 46, 1885).—The writer strongly recommends that the cord should not be tied till all pulsation in it has ceased, and in the course of his paper mentions the following facts as evidence of the importance to the child of the small quantity of blood thus saved to it. He contrasts

the mortality of all the premature children born in the Klausenburg Hospital during the last eight years, during the first four of which it was the custom to ligature the cord immediately on the birth of the child, while during the latter four the plan of treatment he advises was practised. During the first period there were ninety premature undersized and underweighted children born, of whom seventeen, or 18.88 per cent., died within ten days of birth, while during the latter period there were seventy-four such births, of whom ten, or 13.51 per cent., died within the same time. In cases where the mother became feverish, a wet-nurse was had recourse to. "This striking difference of mortality can only—in the absence of any other visible cause—be attributed to late ligature of the cord."

ANTIPYRIN IN ARTICULAR RHEUMATISM.—Masins in a recent communication publishes the results he has obtained from administering antipyrin in fevers (*Bull. Acad. de Méd. Bel.*, 1885, p. 25, and *L'Union Méd.*, December 17, 1885). He has found its action to be quick, certain, powerful, and sustained, of great value in high temperature. In acute, subacute, and articular rheumatism, not accompanied with fever, he has observed that from three to five grammes, given in doses of one to two grammes with a few hours' interval, have reduced the temperature to the normal standard, and lowered the pulse, and produced a considerable improvement in the articular symptoms; sometimes modification of the local condition precedes the lowering of the temperature. In order to prevent relapse, antipyrin should be administered for eight days after the patient appears to be cured.—*London Medical Record.*

HYPODERMIC QUININE SOLUTION.—Professor S. S. Burt says, in the *Quart. Bulletin Clin. Society*, that he has found the following a satisfactory solution of quinine for hypodermic use:

Quinine bisulphate, gr. lx;
Boric acid, gr. ij;
Morphine sulphate, gr. ¼;
Distilled water, ℥j. M.

S.—For use subcutaneously. One drachm represents seven and a half grains of quinine. —*Druggists Circular.*

GONORRHŒA TREATED BY KAVA.—An article contributed by Dr. Robert to *La France Médicale* describes the discovery of the efficiency of kava (Piper methysticum), by Dupuoy in 1874, in the treatment of a number of cases of sailors suffering with gonorrhœa. The root is the portion of the plant used in medicine, of which a fluid extract or an infusion may be employed.

CARSON'S PAINT.—Croton oil, two drachms; ether, four drachms; comp. tinct. iodine, ten drachms. Applied with camel's-hair brush, to produce mild pustular eruption.

MISCELLANY.

THE POLYCLINIC HOSPITAL.—The Philadelphia Polyclinic and College for Graduates in Medicine enters upon its fourth year of work by establishing in its new building at Broad and Lombard Streets a hospital department, where cases of a character too serious for dispensary management can be treated. A number of patients have already been operated on in the wards of the Polyclinic Hospital, which adds another institution to the list of those in which the poor classes can receive skilled professional care. The new location of the Polyclinic is a fine one for both pupils and patients.

The building is situated on a corner, which circumstance permits the college to have separate entrances for dispensary-patients and for those coming to visit paying patients in private rooms or wards; and to have the whole building well lighted by a large number of windows. The two lower floors are occupied by the dispensary-rooms, drug-store, dean's room, pupils' reading-room, etc.; the two upper stories, by wards, private rooms, kitchen, dining-room, and attendants' quarters.

The practical teaching to physicians given by the faculty in the special departments of medicine and surgery has been found very acceptable to both recent and older graduates of the medical colleges of the country. Pupils have come from all sections, because the instruction in this, as in other polyclinic schools, is distinctively personal. The members of the faculty have connections with nearly every hospital in Philadelphia, and are therefore enabled to show many unusual cases to those who desire to avail themselves of the opportunity. Recently several additions have been made to the teaching corps, in order that the classes might receive the advantage of hearing the opinions and profiting by the experience of various hospital physicians and surgeons. The growth of the Polyclinic, despite the opposition with which its inception was met, proves the wisdom of its founders and the necessity for its existence.

BRAIN-TUMORS AND BRAIN-SURGERY.—There are evidences in some quarters of a reaction from the very favorable conclusions as to the applicability of physiological theories of cortical function in the diagnosis and localization of brain-tumors, and the consequent resort to the trephine for their removal, which were freely expressed when Mr. Godlee's case was first reported in the journals.

An interesting discussion was held recently at the London Pathological Society, when fifty cerebral tumors were exhibited by the members. The *British Medical Journal* states that one generalization which can be drawn from the exhibit may be summarized

as follows: "A tumor may occur in any region of the brain; that the region within which symptoms permitting localization occur is very limited; and that, therefore, surgery can do nothing for a large proportion of the patients who suffer from such tumors."

CERATUM PLUMBI SUBACETATIS.—The following formula for the preparation of Goulard's cerate is said to yield a more satisfactory and stable preparation than that made in accordance with the officinal directions:

Crystallized subacetate of lead, 5 parts;
Glycerin, 20 parts;
Camphor-liniment, 5 parts;
Simple cerate, 70 parts.

Dissolve the salt in the glycerin with the aid of heat; allow to cool, and thoroughly incorporate with the cerate.—James Kennedy, in *Pharmaceutical Record*, New York, February 15, 1886.

ASSOCIATION OF AMERICAN MEDICAL EDITORS.—The next annual meeting of the Association of American Medical Editors will be held at St. Louis on Monday evening, May 3. It has been proposed by the editor of the *American Lancet* that the addresses of the evening shall be preceded by a subscription dinner. If the Committee of Arrangements, of which Dr. Legrand Atwood, of St. Louis, is chairman, conclude to accept the suggestion, and will make the necessary preparation, we feel assured that the attendance upon the meeting will be much increased, and the pleasure of those present very greatly enhanced.

IODINE-COLLODION CAUSES GANGRENE.—The application of iodine-collodion to a frost-bitten finger in Vienna last year, it will be remembered, led to a loss of the finger and the suicide of the physician from mortification on account of the unfortunate notoriety given the case. Dr. Vogelsang, of Biel, now reports (*Memorabilia, Med.-Chir. Rundschau*) a case in which iodine-collodion painted over a large surface was followed by gangrene of the skin and sloughing. In one case collodion was applied over a gland which had been painted with iodine: the result was a slough and an ugly ulcer.

COLDEN'S LIQUID BEEF TONIC has been before the profession for a score of years, and has met with much success. Its composition is given as follows: saccharine matter, 20 per cent.; meat-juice, 25 per cent.; spirits and water, with bitter extractives from cinchona and other barks, 55 per cent. Each tablespoonful also contains two grains of soluble citrate of iron.

MEDICAL LEGISLATION.—The *Maryland Medical Journal* announces that the proposed Medical Bill for that State, based upon those of Illinois and West Virginia, will probably not pass the Legislature, since the Medical and Chirurgical Faculty of Maryland has reconsidered its endorsement and withdrawn its approval, on account of the homœopathic element on the proposed board.

THE ALUMNI ASSOCIATION OF THE JEFFERSON MEDICAL COLLEGE held its annual meeting in the lecture-room of the college, April 1. Dr. W. H. Warder, of Philadelphia, delivered an address entitled "The Lights and Shadows of Medicine and Professional Life." The meeting was followed by a reception at the Hotel Bellevue.

THE SOCIETY OF THE ALUMNI OF THE MEDICAL DEPARTMENT OF THE UNIVERSITY OF PENNSYLVANIA held its annual meeting March 26, in the chapel of the University. The address was delivered by Dr. Charles Gilman Smith, of Chicago. A reception to the orator followed the business session.

NOTES AND QUERIES.

OBITUARY.

JOHN K. KANE, M.D., one of the leading practitioners of Delaware, died recently while on a visit to a sick daughter at Summit, New Jersey. He was born in Philadelphia, December 18, 1833, and studied medicine at the Jefferson Medical College, which graduated him in 1854. He afterwards pursued his studies in the medical schools and hospitals of Paris, and on his return to this country entered upon practice in Wilmington, Delaware, where he occupied a prominent position in the profession and in social circles. He was the son of Judge Kane, of this city, and a brother of General Thomas L. Kane and of Elisha Kent Kane, M.D., the Arctic explorer. Dr. J. K. Kane accompanied the expedition, as one of the surgeons, which went north to the relief of his brother in 1856.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 14, 1886, *TO MARCH* 27, 1886.

CAPTAIN JNO. VAN R. HOFF, ASSISTANT-SURGEON.—Ordered from the Department of California to the Department of Missouri. S. O. 60, A. G. O., March 13, 1886.

ASSISTANT-SURGEON JOHN J. COCHRAN.—Ordered for duty as post-surgeon, Fort Mason, California.

ASSISTANT-SURGEON A. S. POLHEMUS.—Ordered for duty at Presidio of San Francisco, California.
S. O. 18, Department of California, March 15, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM MARCH 14, 1886, *TO MARCH* 27, 1886.

H. M. MARTIN, SURGEON.—Detached from the "Independence" and ordered to the "St. Louis."

D. M. GUITERAS, PASSED ASSISTANT-SURGEON.—Detached from Navy-Yard, Pensacola, and wait orders.

J. W. ROSS, SURGEON.—Detached from special duty, New York, and ordered to Pensacola.

H. C. ECKSTEIN, SURGEON.—Detached from the "St. Louis" and placed on sick-leave.

V. C. B. MEANS, ASSISTANT-SURGEON.—Detached from the "Vermont" and ordered to the "Shenandoah."

N. H. BEAUMONT, SURGEON.—Detached from the "Enterprise," and wait orders.

PHILADELPHIA, APRIL 17, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON LOCOMOTOR ATAXIA; SPASMODIC STRICTURE OF THE ŒSOPHAGUS; CHRONIC CATARRHAL NEPHRITIS; AND CHRONIC PERITONITIS.

Delivered at the Hospital of the University of Pennsylvania

BY WILLIAM PEPPER, M.D., LL.D.,

Provost of, and Professor of the Theory and Practice of Medicine and of Clinical Medicine in, the University of Pennsylvania.

Reported by WILLIAM H. MORRISON, M.D.

LOCOMOTOR ATAXIA.

GENTLEMEN,—I do not propose to enter into a minute discussion of this case. I show him to you as a good illustration of ordinary, typical, progressive locomotor ataxia. There are unquestionably extensive lesions in the posterior columns of the cord. He has almost complete anæsthesia of the soles of the feet, so that he does not feel the ground as he stands upon it. There is also great impairment of sensation in the legs. This interruption in the conduction of sensations to the brain through the posterior columns of the cord, owing to the sclerosis, prevents him from having a knowledge of his position and of the contraction of the various muscles, so that he does not know what movement to make to balance himself. This renders it impossible for him to stand in the dark or with his eyes shut, even with the aid of a cane. On watching his feet, you observe that he presents the typical ataxic gait.

The reflexes are almost completely abolished. There is some trouble with the rectum and bladder, but not very marked as yet. The stage of fulgurant pains is passed.

There is, he says, some numbness in the hands in the distribution of the ulnar nerve. The muscles of the face and eyes are not involved.

Here we have a typical case of progressive locomotor ataxia or posterior spinal sclerosis, with its classical symptoms and stages.

Before coming here he was under treatment with large doses of iodide of potassium, having taken as much as one hundred and twenty grains three times a day. Under these large doses the nutrition was somewhat depressed. I have stopped this, and for the time being placed him on the use of nitrate of silver; but it is doubtful how far we can relieve the case where the lesions are as extensive as here. The man has improved under rest, diet, and the abandonment of the colossal doses of the iodide. The rest has been almost complete: he spends twenty-two out of the twenty-four hours in bed. This has been followed by improvement in his appearance and by some gain in his strength and the ability to walk. Rest certainly delays the progress of the disease and economizes the spinal forces, so that the vegetative functions are performed more perfectly than when the patient is allowed to move about. Nitrate of silver is useful, especially in the earlier stages of locomotor ataxia. I shall push this as far as it is safe; but I do not expect any considerable radical improvement.

The prognosis of such a case is exceedingly unfavorable as regards cure, for many of the nerve-fibres are destroyed by the pressure of the contracting fibro-cellular tissue in the cord. The prognosis is favorable as regards the prolongation of life and the relief of symptoms, if the patient be in good circumstances and careful of himself. These cases sometimes run an exceedingly prolonged course. As usual, we investigated the cause of this condition, and it appears to be distinctly traceable to severe constitutional specific taint.

SPASMODIC STRICTURE OF THE ŒSOPHAGUS.

This lady has been in attendance upon the dispensary for some time. She is a widow, aged 48 years; she passed the menopause seven years ago. She has had considerable trouble in family and financial matters, which has extended over a number of years. She has complained of more or less difficulty in swallowing. This dates back a period of fifteen years. This difficulty in swallowing is accompanied by pain behind the upper part of the sternum, increased by efforts at deglutition and followed by return of the food. This pain, with the inability to swallow and the regurgitation, is sometimes noticed at every meal; then she will be comparatively free from the attacks for a few days. It sometimes happens that she will be able to

nearly finish the meal before any of this trouble arises, while at other times the very first mouthful will be followed by the symptoms mentioned. Slightly tart and acid articles excite the attacks more frequently than do bland and unirritating articles. Water often brings on a paroxysm, and meat very frequently does. Of all things she has tried, warm milk can be taken most constantly and with the greatest ease. In addition to these symptoms of œsophageal stricture, there have been evidences of gastric disorder of a catarrhal dyspeptic type. There has been frequent vomiting of mucus early in the morning, and occasionally she is awakened at night with the vomiting of sour mucus and partly-digested food. She has a poor appetite, digestion is slow, and she has some feeling of weight and fulness in the epigastrium. Her general health has been somewhat depressed, and she has lost some flesh. The amount of weight lost, however, is very small considering the duration of the case and the severity of the symptoms.

What is the nature of this stricture? We divide strictures of the œsophagus into organic and spasmodic. We distinguish between these two, in the first place, by the history of the case. Organic strictures sometimes come from traumatic causes, such as the swallowing of caustics, acids, and the like. It is sometimes the result of syphilis, being preceded by symptoms of œsophageal ulcer and slowly developing contraction from the formation of a cicatrix. It also results from the presence of a neoplasm, pressing upon or developing within and obstructing the tube. We have in organic stricture slowly developing difficulty of deglutition, at first for large pieces of solids, then for smaller pieces, then for thick liquids, and finally for thin liquids. This difficulty of deglutition is slowly progressive.

Spasmodic stricture, on the other hand, is characterized by the fact that it is associated with conditions which lead to neuroses, and is accompanied with some evidences of nervous disorder. It is often found in hysterical persons. The present case is proof that hysteria is not necessary for its development, but that it may result from nervous exhaustion and prolonged nervous strain. In this patient the difficulty of swallowing appeared after a long period of successive nervous shocks, protracted anxiety, and depressing emotions, breaking down the nervous system. Spasmodic stricture is not slowly progressive, but paroxysmal. In this case the obstruction is almost complete at times, and then for days there is very little difficulty. At times it appears on attempting to swallow the first mouthful, while again she will finish half the meal before the difficulty appears. It is therefore fluctuating and not constant.

The effect upon the general health is very different. In the organic stricture, if there be a constitutional syphilitic condition, and still more if there be a cancerous development going on, the general health suffers, and there is rapidly progressive emaciation, debility, and cachexia. In spasmodic stricture the patient preserves weight and general health marvellously well. Although the distress is great, still they manage to get enough food to supply their needs, and, as there is no organic disease sapping their vitality, the nutrition is well preserved. Although this patient has had these symptoms for a number of years, she has lost only five pounds from her best weight. This is a very significant fact.

The most conclusive means of determining between organic and spasmodic strictures is by the passage of a bougie. In organic obstruction the bougie will determine the point at which the stricture begins, its tightness, and the length of œsophagus involved. In spasmodic stricture of the œsophagus the button may at first be grasped tightly, but a little gentle pressure overcomes the constriction, and a good-sized ball can be passed through the whole length of the œsophagus.

There are one or two cautions to be given in probing the œsophagus. No matter whether you feel certain that the stricture is a spasmodic one or not, the bougie should never be introduced until aneurism of the aorta has been carefully excluded; for if there be an aneurism the pressure of the button may be sufficient to cause its rupture. In this case there is no such condition. Great care must be exercised in the use of sounds with movable balls. It might happen that in the flurry of passing the probe the operator might unscrew the ball from the handle. While I presume that the ball would be passed from the alimentary canal, at the same

time the accident would be alarming both to the patient and to the operator. It would be advisable to have each ball supplied with a handle securely fastened to it. Morell Mackenzie recommends balls with an oval section, for, as you know, the œsophagus is a flattened tube whose transverse diameter is greater than its antero-posterior diameter. Such buttons can often be passed more easily than a round button in case of stricture.

I shall now pass the probe. At the upper part of the œsophagus it is grasped with some firmness, but a little gentle pressure causes it to yield, and the bougie now passes without difficulty.

The diagnosis of such a case as this is easy. The symptoms are characteristic. It is essential to recognize the cause, for its removal is important in the treatment. In many of these cases the cause is found in a condition of nervous disturbance, hysteria, or emotional shock or long strain. In addition, there is often gastric irritation. In other cases there is ovarian or uterine irritation. In this case we have a condition of dyspeptic catarrhal inflammation, which I have no doubt has played a part in keeping up this spasmodic condition of the œsophagus, and must be treated before we can hope to cure the stricture completely.

The prognosis is, of course, favorable as regards life and our ability to cure it, provided we can remove the cause.

In this case, so far as the emotional influences are concerned, we cannot remove them, but the gastric trouble may be relieved. The diet should consist of warm milk, light cereals, and finely-minced meat. The meals should be taken in smaller quantity and at somewhat shorter intervals than usual, and we should endeavor to make digestion as complete and as free from irritation as possible. For the relief of the catarrhal irritation, I shall use moderately full doses of bismuth and pepsin, giving her, after each of five light meals, five grains of pepsin with eight grains of subnitrate of bismuth. With this I shall apply counter-irritation over the epigastrium with blistering collodion, making a blister about two inches in diameter, and repeating this every couple of weeks. As far as the œsophagus is concerned, great benefit will be derived from the systematic passage of the sound, and we shall have her come to the dispensary twice a week to have the sound passed as you saw me do to-day.

CHRONIC CATARRHAL NEPHRITIS.

This young lady is suffering with Bright's disease, but we have been unable to determine how or when it began. She is 23 years of age, and has been doing ordinary housework. She never had scarlet fever, so far as we are able to ascertain. She had a severe attack of diphtheria when five years of age. This was not followed by dropsy, and, as you know, diphtheria is much less likely than scarlet fever to be followed by Bright's disease. For the past two years she has suffered with attacks of headache, coming on like attacks of megrim, unilateral and trigeminal, sometimes going on to produce sickness of the stomach. At first these attacks came every month, being worse at the menstrual periods. In the intervals, attacks of headache would occur every three or four days. Lately she has had pain over the eyes and on top of the head every morning on rising. There was no apparent cause for these headaches. There was no strain of the eyes, and her work did not oblige her to use the eyes. Her work was not of an exhausting character. In searching for a cause of these headaches, I found that for some time she has been obliged to get up once or twice during the night to urinate. Further, we learned that for five weeks past the eyesight has become so dim that she is unable to read or sew.

These symptoms at once called attention to the necessity of examining the urine. On boiling, it was found to contain one-fourth its bulk of albumen. Its specific gravity was 1010, its color pale, and on standing it deposited hyaline and granular cysts. For the past year she has had marked dyspepsia. This has been shown by a heavily-coated tongue, bad taste in the mouth, want of appetite, and constipation of the bowels. Examination of the eye-ground with the ophthalmoscope shows advanced albuminuric retinitis, with patches of exudation in various stages of absorption.

Here, then, is a case of chronic catarrhal nephritis, which may be traceable back to the attack of diphtheria, or which may have come on as a subacute idiopathic disease. It is impossible to decide this point, and it is equally impossible to say how long this disease has existed. This

case illustrates the necessity of examining all cases carefully. The symptoms which led to the diagnosis in this case were the recurring headaches and the dimness of vision.

Finding this condition of albuminuric retinitis with the evidences of chronic catarrhal nephritis, we conclude that the headaches are connected with the organic change in the kidney, and are in all probability what may be called uræmic in type. These symptoms are associated with the retention of effete matters in the system which should be eliminated by the kidneys, and the presence of which in the blood leads to irritation and depression of the nervous system, with this tendency to headache. This is not an uncommon expression of the early stage of uræmia. Giddiness, impairment of memory, and drowsiness are other symptoms which often follow. Such manifestations should put you on your guard, for, if overlooked, they may suddenly be followed by uræmia in an intense form, with grave nervous symptoms, eclampsia, deepening stupor, coma, and even fatal results.

You must also remember that in Bright's disease, although the lesions are chiefly located in the kidneys, they are none the less attended with disorders of the general nutrition, and in all probability there are slight changes in the vessel-walls of other parts of the body. When these changes affect the vessels of the lungs, pulmonary symptoms will be present; when the minute vessels of the brain are involved, there will be cerebral symptoms. Sometimes the walls of the heart are attacked, leading to the development of secondary lesions in that organ. I do not regard the symptoms as entirely dependent upon the retention of effete matters in the blood, for frequently there is associated with this actual tissue-change, affecting particularly the minute vessels. Where we see, as here, positive retinitis with thickening of the perivascular sheaths and with exudation, we cannot reasonably doubt that somewhat similar changes may have occurred in the minute vessels of the brain and its membranes. The symptoms called uræmic are not always entirely dependent upon imperfect elimination of effete matters, but may in part be due to actual local change in the nerve-centres. In a case of this kind I should suspect that the secondary lesions were of considerable importance.

I am anxious to bring this patient under the influence of jaborandi. As the girl is run down, I shall give her iron, probably in the form of Basham's mixture, in doses adapted to the condition of the stomach. While this acts favorably upon the general nutrition, and by its diuretic qualities acts somewhat upon the kidneys, its eliminative effects are not sufficiently powerful where we know that uræmia is threatened. I shall therefore associate with this treatment the use of jaborandi, which is of great value for this latter purpose. I have found jaborandi particularly useful in favoring the absorption and removal of such lesions as we can watch in the eye in albuminuric retinitis. I have more than once seen grave uræmia, with considerable dropsy and dimness of vision amounting to almost total blindness, with the ophthalmoscopic evidences of extensive retinal changes, pass away under the persistent use of jaborandi. Not only have the symptoms subsided and vision returned, but the ophthalmoscope has shown a steady and progressive decrease in the retinal lesions. This patient has been under observation but a short time, and we cannot determine how long the disease has been present, and we do not know what reaction we shall find. We cannot promise such brilliant results in this case. One week ago we ordered her to take the fluid extract of jaborandi in fifteen-drop doses. She says that she was unable to retain this. I shall now instruct her to take five drops after each meal, and gradually increase it until she reaches fifteen drops three times a day. If she still vomits the drug, we shall give it by the rectum. Pilocarpine would answer very nicely here if it were not for its expense. The diet will be carefully regulated, and she will live almost entirely on skim-milk.

CHRONIC PERITONITIS.

J. M., aged 20, a laborer, has not been working very hard, and has not been much exposed to the weather. His habits are regular, and he does not use alcohol. The family history is good. He came to this country five months ago, and was then apparently well. He was always a delicate child, however, and when seven years old injured himself about the chest by a fall. This was followed by an abscess which is believed to have been in the chest-wall. One month after coming to this country

he began to have a little pain and soreness about the pit of the stomach. This did not seem to be influenced by eating. Six weeks ago, without apparent cause, there was a great increase of the pain and soreness, with general aching through the body, and with this there was moderate fever. This attack seemed to last one week. The pain and soreness have since then been more marked, and lately he has noticed that the abdomen is uniformly enlarged.

This patient presents the appearance of a stout lad, but his face looks bloated; the color is pale and waxy; there is, however, no pitting on pressure; there is no history of inflammatory rheumatism; the action of the heart is rapid and a little labored; there is over the præcordia a depressed cicatrix which marks the situation of the old abscess; the heart is pushed upward a little by the distention of the bowel, but its size is not materially altered; there is no valvular murmur; the sounds are heavy and slightly prolonged. This is particularly true of the second aortic sound, which is distinctly intensified, but without murmur. There is, then, probably thickening of the left ventricle, with increased arterial tension, suggesting some obstruction in the line of the arterial circulation,—such a condition, therefore, as we find in chronic contracted kidney. This is the first time that I have seen this patient, but the condition of the heart would lead us to examine the kidneys. I now learn that there is a trace of albumen, but there has not yet been time to examine for tube-casts, which will be done.

Turning to the abdomen, we find that it appears to be uniformly swollen. There is resonance all over the abdomen, and I can detect no fluctuation at any point. I can find no tumor, but the belly is not soft and yielding as it should be. There is a sense of uniform resistance which cannot be entirely overcome by pressure. In some positions it seems a little more resistant than in others. There is apparently no enlargement of the liver, and there is no marked enlargement of the spleen. A little tenderness is present.

It is altogether probable that this condition is dependent upon subacute peritonitis. There probably has been at first a little local peritonitis in the region of the liver, accounting for the soreness and tenderness first felt, and then a slight general peritonitis supervened, explaining the attack of fever with pain and soreness. The abdomen gives the sensation which is found when coils of intestine are agglutinated together, preventing them from being freely pressed from one point to another.

There is no history of phthisis in the family, and he has never had any cough or other symptom referable to the lungs.

Subacute peritonitis may follow repeated slight attacks. It may be associated with tuberculous formation. The condition of this patient is not satisfactory. The action of his heart may be simply the result of excitement, and I may be mistaken in thinking that there is anything suggested by it. The trace of albumen in the urine might, in the same way, be accounted for by a little congestion of the kidneys. We occasionally find subacute peritonitis just as we have subacute pleurisy in the course of chronic contracted kidney.

As I have said, there is no history of tuberculosis in the family, and there is therefore reason to hope that this is not tuberculous in character; but of all forms of peritonitis, tuberculous peritonitis is the one most likely to be associated with irritation of the mucous membrane of the bowel. We find here a little tendency to looseness of the bowels, although no actual diarrhœa. In the other forms of peritonitis the irritation of the serous membrane is apt to be attended with constipation from inaction of the muscular layer of the bowel. The case, however, is an obscure one, and we have not sufficient data for a diagnosis at the present time.

ORIGINAL COMMUNICATIONS.

THE VALUE OF BINIODIDE OF MERCURY AS AN ANTISEPTIC IN OBSTETRICS.—SECOND PAPER.

Read before the Obstetrical Society of Philadelphia, April 1, 1886,

BY EUGENE P. BERNARDY, M.D.

AT a meeting held June 4, 1885, I had the pleasure of reading before this Society a paper on the "Value of Biniodide of Mercury as an Antiseptic in Obstetrics." It was with hesitancy that I brought forward the claims of a new

agent whose properties were at that time comparatively unknown. My only knowledge of its effects was that which I had derived from reading the experiments of Dr. Miquel, of France, and from my experience in three cases. To-night I again bring it to your notice, not as an unknown and untried antiseptic, but as one which has proved itself far superior to any of this class of preparations which I have thus far used in my obstetric practice.

Since writing my first paper, I have learned that the biniodide of mercury has been used for the past year in preference to all other antiseptics at the Lariboisière Maternité of Paris, and the reports of the results obtained have likewise been highly favorable.

In a letter written by Dr. Thomas Linn from Paris, France, to the *Philadelphia Medical Times* (March 6, 1886), referring to the subject of antisepsis, the following passage occurs:

"Professor Panas has again something to say about antisepsis in eye-surgery, principally in the treatment of cataract. The principles that guide him are, first, to make use of an antiseptic that is *sure* and *not irritating* in its action. . . . . Of all the antiseptics which he has used during the last two years, Dr. Panas has now definitely adopted a solution of the biniodide of mercury in 20 to 1000 ($\frac{1}{20}$ to 1000 ?).* Even in 40 to 1000 ($\frac{1}{40}$ to 1000 ?), this salt possesses a very strong anti-fermentative power, so that at double the strength nothing should resist it. . . . . As to the other antiseptics used: boric acid is not irritating, but its antiseptic power is doubtful; the bichloride of mercury is more irritating than the biniodide, and its antiseptic power is not half so great."

These remarks fully substantiate the opinion expressed in my former paper, that I considered the biniodide of mercury far superior to the bichloride of mercury as an antiseptic. Of course, the cases of Dr. Panas belong to eye-surgery; but still the experiments made in both classes of cases led to the same conclusions.

I have here the history of eight other cases in which I found it necessary to use the biniodide. I have perhaps given a fuller detail of circumstances than may appear necessary. If I have so erred, I have done it for the purpose of fully and clearly showing under what conditions the antiseptic was used.

It will be observed how readily offensive odors disappeared after only a few injections of the biniodide. In some of the cases the odor around the patient was perfectly horrible.

Case I.—On September 9, 1885, I was requested to attend Mrs. F., residing at Fifty-fifth and Vine Streets, in her fifth confinement. Her previous labors had taken place in Belgium, and had always been terminated by the forceps; only two children being born alive. The first and third lyings-in were complicated by attacks of puerperal fever.

I arrived about 2 P.M. Found the patient had been in labor since the previous evening (8 P.M.). On examination, found the os completely dilated, head presenting; while to the left I felt what seemed to be a prolapsed cord. The head seemed jammed between the promontory of the sacrum and the pubes. I ruptured the bag of waters, so I could make a more decisive examination. Down came a loop of non-pulsating cord, which proved to be irreducible on account of the position of the head. The presentation was now made out to be a partial brow; an antero-posterior contraction existed; the promontory of the sacrum caught the side of the head and pinned it in position. I attempted to push the head up, but soon found it could not be done. I then attempted to produce flexion, and failed. Wallace's forceps met with similar results: on account of the unnatural position of the head, the forceps constantly slipped. By this time I was completely exhausted. I gave one-half grain of morphiæ sulph., which would insure the patient needed rest, as her pains had all along been active.

On my return at 5 P.M., found the condition of things the same. Dr. A. E. Roussel, who came with me, etherized the patient. I again attempted to change the position of the head, but failed. Pajot's long forceps were applied, but on the slightest traction they would slip. Tarnier's forceps seemed to grasp the head in a firmer manner, but they finally gave way. I had now worked continuously for two hours. Seeing there was no other resource, I perforated the head, and within twenty minutes the child was extracted, which weighed, without the brains, fifteen and one-half pounds.

The patient was living on the second floor, in a room partitioned off the main room of a factory. The room was well located and freely supplied with fresh air. Her husband was the nurse. The next day found the pulse 100, temperature 101°; extreme tenderness over the abdomen, especially over the region of the uterus. I washed out the uterus with the $\frac{1}{15000}$ solution of the biniodide of mercury, and left orders to have it done four times a day.

* Evidently an error in proportion, as in the formula given it is 1-20 gramme to the litre, or 1 to 20,000.

The second visit found the patient free from pain; pulse 80, temperature 98⅛°. Convalescence went straight on as in a normal labor. On the fourth day there was considerable pain over the uterus. Towards evening, while washing out the vagina, a clot of blood about the size of a pigeon's egg was expelled, perfectly free from odor. The patient was up on the eighth day.

Case II.—Was called (October 5, 1885) to attend Mrs. Mc., age 30, third confinement. After an easy labor she was delivered of twins. The placenta came away naturally, and everything went well up to the evening of the sixth day, when she became suddenly feverish and thirsty. The vaginal discharges became highly offensive,—so much so that the windows had to be constantly kept open. I immediately ordered injections (hot) of the $\frac{1}{4000}$ solution of the biniodide of mercury, asking the patient to note particularly when the odor disappeared. The first injection was followed by no effect; but on the second injection being made, the odor disappeared, and did not return during convalescence. Discharged on the tenth day, well.

Case III.—On the morning of October 7, 1885, I was called to attend Mrs. B., age 28, sixth confinement. About a month previous she had called at my office, and I had given my opinion that the child she was carrying was undoubtedly dead, and that she was likely to fall in labor at any time. On my arrival at the house, found, after examination, the os perfectly dilated and the bag of waters protruding between the vulvæ. Ruptured the bag of waters, and of all stenches I never smelled the like. The windows had to be thrown open. On pushing my examination, found a small hydrocephalic child descending. Labor was lingering, but finally the child (in a putrid condition) was expelled naturally. The placenta came away without any trouble.

I ordered the patient to be washed out with $\frac{1}{4000}$ solution of the biniodide of mercury four times a day. The first injection I administered myself. The second and third injections were followed by a slight stinging sensation, which I believe came from using water which was too hot; but, to make certain, I reduced the biniodide to the $\frac{1}{8000}$. Within two days the discharges became perfectly odorless. Each injection was followed by a feeling of ease and comfort. Discharged well on the ninth day.

Case IV.—On October 23, 1885, I was requested to attend Mrs. R. in her fourth confinement. Her third lying-in had been followed by a severe attack of puerperal fever. Upon examination, found the os rigid, dilated about an inch; waters ruptured; vertex presentation, right occipito-posterior position. Labor was lingering, os remaining somewhat rigid. About 9 P.M., no headway having been made, and the patient showing symptoms of exhaustion, she was fully etherized. I then applied Wallace's forceps and delivered her of a living child; no laceration. The next day she complained of pain over the region of the uterus. Ordered one-eighth grain morphiæ sulph. in tablespoonful of camphor-water every two hours. On my next visit found the tenderness had increased and the discharges from the vagina were becoming offensive. Ordered hot injections of the $\frac{1}{4000}$ solution biniodide of mercury. The following day the discharges were free from odor, the tenderness of the uterus abated. Discharged well on the fourteenth day.

Case V.—On the morning of November 3, 1885, I was asked to see Mrs. C.,—first confinement. In this patient a year previously I had dilated a constricted os. Pregnancy was ushered in with marked kidney-trouble: the urine yielded over thirty per cent. of albumen. The patient was enormously swollen from dropsical effusion. The case from the start was not a promising one. On arriving at the house, found the patient very nervous; on examination, found the os slightly rigid, but dilating, the waters ruptured. Labor dragged on slowly all day, with very little advance. Towards twelve, midnight, she suddenly went into a spasm; I immediately etherized her; by the time she was completely etherized Dr. Curtin, whom I had sent for, arrived. On examination the os was found dilated, slightly rigid. The ether was pushed, with the effect of softening the os. I then applied Simpson's forceps, but they would not hold; Wallace's long forceps were applied, and in a short time the patient was delivered of a fine bouncing boy; no laceration.

The next visit found the patient doing well; pulse about 80, temperature normal. On my second visit the temperature was 102°, pulse 120–130, great fever, excessive tenderness of the uterus, the discharges very offensive. This sudden change was caused by the stupidity and incompetency of the nurse. The nurse being discharged, the mother of the patient undertook to nurse her. I immediately ordered hot injections of $\frac{1}{4000}$ solution of biniodide of mercury. The second injection the odor disappeared, but in this case did not remain away: I believe it was on account of not having a competent person to use the injections. Even as imperfectly as my orders were carried out, the biniodide held the odor under control, as the discharges were never as offensive as before its use. The patient was discharged well on the fifteenth day.

Case VI.—On November 11, 1885, I attended Mrs. L. in her fifth confinement; her last two confinements had been followed by puerperal fever. She had been delivered by an excel-

lent and careful obstetrician. She dreaded the present confinement. On arrival, found the child was born; in a short time the placenta came away. The next visit found the patient doing well, with the exception of some tenderness over the uterus. Being compelled to leave the city, I handed the case over to Dr. A. E. Roussel. On his first visit the patient was feverish, pulse 100, temperature 101°, discharges extremely offensive, excessive tenderness over the uterus. Internally, two grains of quinia and one-eighth grain morph. sulph. were ordered every three hours, and four times a day hot injections of the $\frac{1}{4000}$ solution of the biniodide of mercury. On his next visit found the patient better and the discharges free from odor. The patient was discharged on the ninth day well, feeling satisfied that the *red pills*, as she called the pellets of the biniodide, had saved her from another attack of puerperal fever.

Case VII.—Mrs. B., on December 28, 1885, miscarried about the fifth month. On my arrival at the bedside, found the fœtus had been expelled early during the day; the hemorrhage had been excessive; on examination, found shreds of placenta in the vagina, could detect a larger portion in the uterus; the patient declined any interference, stating that it would come away itself. The patient lived in a small ill-ventilated house, up a court, having for nurse the neighboring women. Gave freely of ergot, but without effect; within twenty-four hours the odor from the vaginal discharges was highly offensive; ordered the $\frac{1}{4000}$ solution of the biniodide of mercury to be thrown up the vagina four times a day; a few injections readily dissipated the odor. On the fifth day the remaining portion of the placenta came away, free from odor. The patient was discharged well on the tenth day.

Case VIII.—On March 20, 1886, I was requested to attend Mrs. ——, wife of a physician. On my arrival at the house, found that labor-pains had set in about 4 A.M. Saturday morning; examination showed the os soft and dilating, waters broken, vertex presentation; labor continued throughout the day, and terminated naturally at 10.15 P.M.; no rupture of the perineum, but the mucous membrane of the vagina, just behind the posterior fourchette, yielded to the extent of half an inch; there was a tendency to post-partum hemorrhage, which was readily checked by compression and the administration of ergot. Next day, pulse 92, skin rather hot, natural flow from the vagina. On my next visit, Monday, March 22, pulse 130, temperature 103½°, pain over the left side of the uterus; the uterus appeared flabby, not having well contracted. Same day at five o'clock, pulse 130, temperature 104°, discharges from the vagina highly offensive. Ordered the vagina to be washed out with a solution of carbolic acid (twenty per cent.), ten grains of sulphate of quinine morning and night, and twenty drops of tincture of digitalis every three hours. Midnight, same day, pulse irritable, quick, and compressible: pulse 128, temperature 103°, the discharges from the vagina still offensive. Next morning, temperature and pulse the same; no change. Ordered the $\frac{1}{4000}$ solution of the biniodide of mercury to be thrown up the vagina, and if possible into the uterus; the injections were administered by the husband, and were thoroughly applied. On the 24th the condition of the patient seemed improved: temperature 102°, pulse 115–120.

On the next morning the husband called at my house and informed me that his wife was in every way worse; the pulse was so irregular that he could not count it; temperature 104°; patient vomited several times; tendency to diarrhœa. I asked Dr. Goodell to meet me in consultation. On arriving at the bedside of the patient, found her in a remarkably good condition; pulse 100, temperature 102°; examination showed slight laceration of the mucous membrane in the vagina, uterus was contracted; treatment to be continued, with this addition if the case did not get along well: to use ten-grain vaginal suppositories of iodoform in conjunction with the biniodide injections. These suppositories were not used, as the case from this day did well, with this exception, that on the 27th March, or the seventh day of confinement, she was allowed to get up and use the night-vase. This was followed by a severe secondary hemorrhage, which was checked by hot-water injection and ergot. From the time the biniodide was used the vaginal discharges were free from any offensive odor, and it seemed to have a decided influence on the temperature. The patient is still under treatment.

We have here eight cases added to the three of my first paper, making in all eleven cases. This certainly gives us sufficient data to draw conclusions.

The deductions drawn from my early cases are fully sustained by my subsequent experience, and in my mind fully establish the value of the biniodide of mercury as an antiseptic in obstetric practice.

In my first series of experiments, to make my solution of the biniodide I took one and three-quarter grains of the salt, placed it in a mortar, and gradually broke up its particles, after which I slowly added one pint of boiling distilled water. This gave me a $\frac{1}{4000}$ solution. This took a long time, and often alcohol had to be added to dissolve the mercury.

Mr. J. F. Hayes, of St. George Pharmacy, conducted a series of experiments

for the purpose of placing the biniodide in the hands of the physician in a convenient and readily-soluble form. To obtain this end, pellets were made of three different strengths. In making them sufficient iodide of potassium was added for the purpose, though not enough to cause any chemical change with the biniodide. The following is the method pursued in making the pellets. Both salts should be perfectly dry. The potassium iodide is first placed in a mortar which has been slightly warmed (just enough to take the chill out of it), and thoroughly powdered; the biniodide is then added and well mixed, but not rubbed hard, or the powder will be apt to cake. Care must be taken not to compress the pellets too hard: they keep just as well and are more easily dissolved when they are compressed just hard enough to make a firm pill. The following is the formula for the pellets:

$\frac{1}{4000}$ = mercuric iodide $3\frac{2}{5}\frac{1}{5}$ grains, potassium iodide 2 grains. Mix as above, and compress in pellet.

$\frac{1}{8000}$ = mercuric iodide $1\frac{2}{5}\frac{3}{5}$ grains, potassium iodide $\frac{3}{4}$ grain. Mix as above, and compress in pellet.

$\frac{1}{15000}$ = mercuric iodide $1\frac{6}{2500}$ grains, potassium iodide $\frac{1}{2}$ grain. Mix as above, and compress in pellet.

In this form the preparation can easily be carried in the satchel. When required for use, one pellet is to be added to a quart of hot water (110°). It dissolves easily, and does not stain the clothing or bedding.

The strength which I generally use is the $\frac{1}{4000}$. Should it appear too strong, the pellet can be cut in half, or twice as much water used, thus giving a $\frac{1}{8000}$ strength.

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INEBRIETY CONSIDERED AS A DISEASE.

BY EDWARD C. MANN, M.D.,

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IN the neurotic circle of society there is a greatly-augmented susceptibility to the action of stimulants and narcotics, and a greatly-increased consumption of chloral and morphine, and of the great nerve-sedative, tobacco. The group of male and female inebriates who exhibit the disease of dipsomania is almost entirely confined to the neurotic circle, and this latter circle is increasing out of proportion to the increase of population. This is due to the influence of the conditions of modern life upon the nervous system, and through the nervous system upon the nutrition of the tissues. The outer relations of the modern American have become more numerous, complex, and heterogeneous than formerly, and his environment more varied and intricate. We therefore find the greatest amount of alcohol-, chloral-, and opium-inebriety in towns and cities, where nervousness and nervous diseases most abound, and not in the rural districts. Its growth is encouraged by the excitement of city life and by the absence of the tranquillizing influences of nature to be met with in the country.

The remote cause is often educational pressure unwisely applied to weakly children, which induces brain-fatigue. A proof of this is found in the fact that the preponderance of alcohol-, chloral-, and opium-inebriety is to be found in the refined and cultivated classes. There are vast reserves of hidden and unauthenticated cases of this kind which reveal great, unfathomed depths of nervous and mental unhealthiness in our community. The great increase in suicides also points in this direction.

The whole order of nervous diseases not necessarily accompanied by mental disorder, but in many instances tending towards it, are widely prevalent among our population. Such diseases are epilepsy, paralysis, locomotor ataxia, spinal irritation, neuralgia, hysteria, chorea, etc. A bodily derangement is responsible for every mental derangement, and a mental element enters into every bodily disease, and the increasing nervousness of this country is most clearly evinced to observant physicians. Mental anxiety and distress and sudden fear and shock are important exciting causes of many of the neuroses; also, the pressure of modern life, keen competition, and the struggle for existence.

In place of a well-balanced growth of body and mind, we too often meet with headaches, imbecilities, nervousness, or insanity, some of which date back to the nursery. It is wise for parents to bear in

mind that a good moral training of their children protects them in great measure against the moral contagia which float about in such varied abundance in the social atmosphere of cities and towns, and which are so inimical to mental health. The subjective properties of an individual's mind depend upon the objective properties of the matter constituting the mind's food. As there is, even in the simplest protoplasmic cell, the action of individual parts for the benefit of the whole, so in society there is the action of individuals which is either beneficent or the reverse to the whole corporate body of society.

To return to the subject of this paper more directly: In the disease of inebriety we have deranged nutrition, which precedes the blood-changes, and the disease arises in abnormal primary and secondary assimilation. Defective assimilation in this disease gives rise to defective secretion. There is an abnormal state of the blood; the blood-supply is not sufficient; there is an abnormal condition of the ganglionic or great sympathetic nervous system, and the parts which are to be nourished are not normal. We have a poor state of the blood and disturbed conditions of life which are often the cause of the disease of inebriety.

We have the *subjective* symptoms, which relate to the sensations or feelings of the patient as expressed by himself in this disease, and we have the *objective* symptoms, which the physician observes for himself unassisted by the patient. In this disease we should examine with care the digestive system, the circulatory system, the respiratory system, the tegumentary system, and the secretory system. The symptoms of inebriety are those signs of disease which are apparent to either the patient or physician on superficial examination, while the physical signs are those which we observe when we make an anatomical examination of the patient's body (that is suffering from inebriety). The different parts of the blood may be affected in this disease. We may have anæmia. The blood in the veins is pink instead of blue, and we hear venous murmurs, when the red blood-corpuscles run below eighty in a thousand. There should be normally one hundred and twenty-seven in every thousand. We can see in these the beating or throb of the vessels at the root of the neck. Anæmic or hydræmic blood is due, therefore, to a relative increase of the white corpuscles of the blood. We see this often in inebriety, and in those who are addicted to the chloral and opium habits. The connection between the nervous system and a proper supply of the red corpuscles or arterial blood is very intimate. Thus we see women and men addicted to alcohol, chloral, or opium (or the bromides, as some women are) very nervous and irritable. This is explained by the connection between the blood-vessels and the nerve-centres, and it consists in an altered condition of the nerve-matter from defective nutrition. The blood normally contains two qualities,—viz., nutrition and stimulation. The stimulation is due to the oxidizing process, and impoverished blood is defective both in nutritive and in stimulating qualities. These patients complain of much headache from anæmia. There is a semi-paralysis of the vaso-motor part of the ganglionic system, which is so intimately connected with the capillary system in the disease of inebriety. We have also toxæmia, or blood-poisoning, produced by the introduction into the blood of poisonous elements from without,—alcohol, chloral, or opium. We have also morbid elements and alterations occurring in the blood; and, finally, the non-excretion of the poisonous elements which should be eliminated. The blood is poisoned, and we get a structural, vital, and general change in the blood in inebriety, from whatever agent—alcohol, chloral, opium, or the bromides—the patient indulges in habitually. Molecular death of the blood commences, the contractility of the heart's fibres begins to be lost, and death will finally occur unless the art of the physician interferes.

In the disease of inebriety we have a morbid action proceeding from the direct action of the cause. There are various circumstances which modify this, as other diseases. It varies very much as regards severity, length, etc., in different individuals of different ages, sexes, and conditions of health at the time of the invasion of the disease. In young men and women we find the arterial circulation very much livelier than at any other age, and inebriety affects the brain through its circulation, sometimes with frightful rapidity producing an intractable type of insanity; while in the old we find apoplexies, ather-

omatous degeneration, and softening. In this disease we have the entrance of the morbific agents and change in the blood. At a certain point the nervous system becomes involved in the morbid action. There is a degeneration of the muscular force, and the various organs of the body may become complicated. In this disease we get after a time an asthenic state of the system, due to the excessive venosity of the blood, a contaminated state of it, with a local hyperæmia of the centric nervous system, a congestion, which is one of the most common causes of cerebral disease. Finally, there is induced from atony of the vessels a state of passive hyperæmia of the brain and nerve-centres, associated, I think, with disease of the coats of the vessels themselves. There is a want of tonicity in all parts of the circulatory system. As the ganglionic nervous system has a direct influence over the capillary system, the morbid impression produced on the ganglionic system by alcohol, chloral, or opium will excite local passive hyperæmia. The over-excitement of the vessels themselves, moreover, causes them to fall into an atonic tortuous condition, causing a state of passive hyperæmia. The effects of these local congestions in the brain and various organs of the body in inebriety have reference—1, to the impaired vitality of the part or organ; and, 2, to the effusion from overloaded vessels.

We have congestion, stagnation, and determination of blood, with lowered vitality and a tendency towards destruction of tissue. The local excitation passes beyond physiological limits and produces enervation, the result of irritation. The chemico-vital relation between the blood and the nerves being disturbed, we get inflammation of a low grade in the liver, kidney, etc. The degenerative processes in inebriety are slow, progressive, and chronic, with a tendency towards decay and death, and there is a tendency to fatty degeneration at times, or a tendency to the replacement of the natural or healthy tissue by oil-globules. In all the forms of degeneration in inebriety there is substitution of abnormal tissue for healthy tissue. The muscular structures are most frequently involved, the heart, liver, kidneys, and also the brain. Atheroma of cerebral arteries is a frequent form of degeneration in inebriates. The deposit takes place between the lining coats of the artery. This degeneration may be calcareous, and it takes place in vessels which have lost their nutrition, or which have been subject to abnormal changes. We may also find amyloid or waxy or albuminoid degeneration in various organs in this disease. This degeneration is supposed to be owing to fibrin which has lost its alkalinity.

Inebriety is a disease probably of certain parts of the brain, resulting from *some morbid irritation of the cortical sensory centres*, or from special molecular changes in these centres, perverting brain-function, a condition markedly hereditary, and evinced outwardly by great nervous irritability or restlessness, unnatural sensations, an uncontrollable desire for alcoholic stimulus, and a disposition to frequent fits of intoxication. There is a departure from a healthy structure of the nervous apparatus, as in mental diseases generally. The pathological evidence in favor of these facts was at first slender, has been yearly increasing, and is to-day conclusive and unanswerable. The inebriate is a subject of disease in which normal function is acting under abnormal conditions, and we should recognize this fact both as to medical and moral treatment. Dipsomania is inconsistent with a healthy discharge of the functions of the brain and other portions of the nervous system. It is a symptom of a morbid condition of some portion of the nervous system, and experience shows us that this disease is the most frequent where diseases of the nervous system are most fatal. I have no data to indicate what proportion of persons laboring under diseases of the nervous system exhibit dipsomania; nor is it necessary here to inquire what the proportion may be. It is sufficient for our purpose that there is no reason to believe that the proportion in one locality will differ materially from the proportion in another locality: hence, if in any locality we find the number of deaths from diseases of the nervous system persistently large year after year, we may with fairness conclude that dipsomania and the disease of inebriety will be exhibited with proportionate frequency in that locality. Statistics indicate that nervous diseases are exceptionally more frequent in densely-populated districts, and I think they may also be accepted as indicating that dipsomania, which is one of the manifestations of

nervous disease, exists to a greater extent in urban than in rural districts, and the results of careful inquiry both at home and abroad have shown the author that the urban population yield cases of this disease in much larger proportion than the rural population.

Inebriety and dipsomania are governed by the same laws which govern mental pathology generally, and in our work on the disease of inebriety our aim has been to make our investigation as exhaustive as possible, that the results should be conclusive and scientific when presented to the profession and to the public. To this end the author has studied this subject from the stand-point of physiology and pathology, and not as either a moralist or a reformer, and his conclusion is that inebriety is a disease, a true neurosis, and that a departure from a healthy structure of the nervous apparatus exists as in mental disorders, and that in fact it is this abnormal condition of the centric nervous system demanding stimulants that is essentially the disease.

It is not generally known that Esquirol distinctly recognized this disease, both in its continued and its periodic form, under the name of dipsomania.* This distinguished authority on mental diseases says that sometimes the abuse of intoxicating drinks and drunkenness are the first symptoms, or rather the most prominent symptoms, of the first stages of madness; that "the stomach, being in that peculiar condition which produces an extremely painful moral and physical depression, craves strong drink;" that "this craving is imperious and irresistible;" that "it continues as long as the paroxysm, after which the patient becomes sober and assumes all the habits of a temperate life." This eminent physician also says that these persons "obey an impulse which they have not the power of resisting," and that "they are true monomaniacs;" and that a careful clinical physician will observe in them "all the characteristic features of partial madness."

Another distinguished physician in the field of mental medicine, Marc, says that dipsomania sometimes occurs in women at the climacteric period as a result of the important physiological changes which at that period take place in the female constitution. He says that he has met with many examples of it in women who had previously been habitually temperate, and who had adorned their social sphere.

The legal consequences of this disease are of no little interest to the medico-legal student. The author claims that dipsomania being an accidental, involuntary consequence of a diseased state of brain and mind, "it cannot impart the character of criminality to any action to which it may give rise." The patients suffering from this disease are clearly, we think, not morally responsible.

We think that in this paper we have not indulged in any theoretical speculations on the psychological effects of inebriety and dipsomania, but we have tried to attain to correct ideas concerning the diseased manifestations of inebriety.

204 Lefferts Place, Brooklyn, New York.

* Note in Hoffbauer, § 195; and Maladies mentales, ii. 80.

DRAINAGE-TUBE IN THE CHEST FOR TWENTY-ONE MONTHS.

Read before the Medical and Surgical Society of Baltimore

BY OSCAR J. COSKERY, M.D.,

Professor of Surgery, College of Physicians and Surgeons, Baltimore.

GEORGE C., aged 26, single, presented himself at St. Joseph's Hospital in July, 1885. He stated that he had a rubber tube in the right side of his chest which had been there since December, 1883, and that he wanted it removed; he was not prepared to come into hospital then, however, but would come later. He was of spare build, sallow, freckled-faced, with demi-blond hair and a light moustache; height, five feet eleven and a half inches; weight, one hundred and thirty-three pounds. He had weighed one hundred and fifty-nine pounds.

Admitted into hospital on September 21, 1885, with following history. In May, 1883, had pleurisy; on July 3, 1883, an incision was made in the right axillary line, between the eighth and ninth ribs, and a rubber drainage-tube introduced. This "fell out" on the next day, and a "silver" tube was put in. This also came away, and the wound closed rapidly. At the first insertion of the tube, on July 3, 1883, "many" ounces of pus, he says, escaped. After extrusion of silver tube nothing further was done in an operative way until December 7, 1883, when, under

chloroform, a rubber tube was introduced at the site of the first operation, and one end brought out in the right nipple-line. Since then a constant discharge of pus has occurred at each end of the tube. One year ago he had general anasarca for about four weeks. A month ago he noticed, for a few days, when he got up in the morning, that his face was "swollen."

Condition on admission: patient very anæmic; two openings found in right side of chest, through each of which a portion of the drainage-tube was found projecting; granulations at each opening had rather firmly grasped the tube.

Physical signs: on right side the respiratory sounds over upper half in front and upper two-thirds at back, moderately free; over lower half in front and lower third at back, just recognizable; on left side of chest, respiration puerile everywhere, with prolonged expiratory murmur over upper half, back and front.

On percussion: right side from clavicle to one inch above nipple, clear; from there to nipple (in nipple-line), *dulled;* from nipple to lower border of costal cartilages, dulness complete; line of dulness, seven inches in right nipple-line; in right axillary line, seven inches; in right scapular line, seven and a half inches. No enlargement of liver could be made out.

On ocular inspection a great difference of the two sides of the chest could be noted; the right subclavicular fossa was much increased, while the left was bulged out; there was flattening of the whole right anterior chest-wall, and projection of the left; the intercostal spaces were very apparent, also, on the right side. Respirations 32 to the minute.

Measurements of chest in repose: right side, on nipple-line, fifteen and three-fourths inches; left side, on nipple-line, seventeen inches; at ensiform cartilage, right side, fifteen and one-fourth inches; at ensiform cartilage, left side, seventeen and one-fourth inches.

On September 27, 1885, after some little difficulty, but without enlarging the openings, the tube was withdrawn through the wound in the nipple-line; a very slight amount of granulation-hemorrhage followed.

Upon examining the urine next morning, it was found heavily loaded with albumen; pus has run freely from each of the openings where the drainage-tube was; he has never had a convulsion; sometimes has headache, and has several times had, as to-day (the day after the tube was removed), a "fainting-fit."

The patient was put upon iron and cod-liver oil. His appetite continued poor, and, as diarrhœa made its appearance, the iron was stopped. The albumen in the urine, however, greatly decreased in quantity.

On October 12, 1885, he stated that the discharge had ceased from each opening (it had been to the estimated extent of about three-quarters of a pint daily since the removal of the tube), and that now his appetite had improved. Two days after this he complained that the wounds were again discharging freely, but that although he still felt a desire for food his mouth was so sore he could not take anything into it. A very extensive aphthous ulceration was found, greatest upon the right side, and involving both lingual and buccal mucous membranes. Diarrhœa, which had also improved for a time, returned, and the patient began to go down-hill. Without showing improvement at any time, the patient became dissatisfied, and was removed by his friends on October 21, 1885.

I learned that he died of exhaustive suppuration on November 23, 1885, the discharge continuing from both openings in about the same quantity to the end.

The points of interest in this case seem to be the length of time the tube was continuously worn, and the amount of albumen in the urine. It was at first thought that the latter might be due to organic changes in the kidney as a consequence of the continued suppuration; but the great decrease in the quantity of the albumen excreted under treatment, while the discharge of pus still continued, with a very slight interval, rather seemed to negative the idea.

ATTACKS OF DYSPNŒA RESEMBLING ASTHMA DUE TO PRESSURE BY A FATTY TUMOR, AND CURED BY OPERATION.

BY B. C. KEISTER, M.D.,
South Boston, Virginia.

DURING September, 1884, I was summoned to attend a lady in the country for a supposed case of "spasmodic asthma." The husband came in haste for his family physician, and, finding him ab-

sent, came to my office in a very excited state of mind, and told me that in the absence of his physician he wanted me to see his wife as soon as possible, stating that she was having one of her old attacks of asthma, and that he had fears of her death. I, of course, responded to the summons as promptly as possible. On entering the house and approaching the bedside, my attention was at once arrested by the peculiar breathing of the patient. It was of that peculiar hissing sound characteristic of membranous croup. I then made a brief inquiry into the history of the case, and was informed by the mother of the patient that these attacks were of very frequent occurrence, and that she had been suffering for about five years with "shortness of breath," as she termed it. She also stated that her attacks were becoming more frequent and her breathing more embarrassed, more especially at night. The husband added that he had scarcely any sleep at night, on account of having to attend to his wife. He also added that if she would remain in just one certain position she could sleep without any trouble. I then asked whether she had been taking any kind of medicine, and the mother showed me two vials containing two different medicines,—one of which contained tincture of lobelia and the other Fowler's solution of arsenic. The former was directed to be taken when the attacks came on, and the latter before each meal.

After hearing the history of the case, as well as the peculiar breathing of the patient, I felt satisfied in my own mind that the breathing was not of an asthmatic character, but that, on the contrary, it was suggestive of some obstruction along the trachea. With these considerations on the present aspect of things, I at once desired the removal of all the clothing from about the patient's neck, in order that I might be able to examine and ascertain the cause of her hard breathing. While the mother was thus carrying out my directions to make the neck bare for an examination, the patient turned her head over to one side, as if by accident, and at once stopped her loud breathing and remarked that she felt somewhat better.

This at once clinched my diagnosis; but I proceeded to examine the neck, and, to the surprise of all in the room, I found a fatty tumor situated at the margin of the clavicle and under the sterno-cleido-mastoid muscle. Although buried very deep, and situated under the margin of this muscle, I could feel it very distinctly and move it about with a very small amount of pressure with my fingers. I then turned the patient's head, by way of experiment, and found, to my full satisfaction, that the tumor was the whole cause of the supposed asthmatic attacks and loud breathing.

Satisfied with my diagnosis, I of course advised an operation for the removal of the growth. After much talk and persuasion, I finally got her consent to operate.

Upon my next visit, accompanied by my friend Dr. H. C. Beckett, of Scottsburg, Virginia, I enucleated, with its capsule or sac, the tumor. It was about the size of an ordinary turkey's-egg. The patient stood the operation well, and she has now entirely recovered her health and is quite free from her supposed asthma.

She has given birth to one child since the operation, and she remarked to me, when I last saw her, that she suffered less in her last pregnancy than in any one of the previous four. She also remarked that she was then enjoying better health than she had for more than ten years. The tumor had developed slowly, as lipomas usually do. It is quite probable that the asthmatic attacks were produced by irritation of some branch of the pneumogastric nerve by the gradually-increasing mass.

I made a brief synopsis of this case and reported it to the *Virginia Medical Monthly* last August. But since that time increasing interest in the case has prompted me to rewrite it, as an illustration of the necessity of a correct diagnosis and its relations to rational treatment.

NOTES OF HOSPITAL PRACTICE.

UNIVERSITY HOSPITAL.

SERVICE OF D. HAYES AGNEW, M.D., LL.D.,

Professor of Surgery in the University of Pennsylvania, etc.

(Reported by CHARLES BAUM, M.D.)

INCURVATED TOE-NAIL.

GENTLEMEN,—Among your cases of minor surgery, incurvated or "ingrown" toe-nail, as it is commonly called, will frequently occur. The term "ingrown," however, is not a perfectly proper one to express the condition, as the nail

retains its width, but by pressing upon the soft tissues provokes inflammation, swelling, and, finally, ulceration, so that the flesh rises up around the nail. Frequently the inflammation extends to the point of ulceration, and fungous granulations also often spring up, the pus from which is unhealthy and offensive. Pain and soreness now become so great as to prevent the sufferer from wearing a shoe, and, if a laboring-man, he may be obliged to quit his work.

A small number of such cases are observed among children, but the majority occur during adult life, and of them ninety-nine per cent. are caused by improperly-fitting shoes, which do not allow space for the toes. Some cases arise from closely rounding the edges in trimming the toe-nail. It should be cut off transversely, when trimming is required. Again, other cases are due to want of cleanliness, thus permitting an accumulation of epidermic scales to collect under the edge of the nail, there to excite inflammation by pressure.

The purple color of this man's toe is due to passive venous congestion, because the veins are not freely emptied. An offensive and unhealthy discharge comes from these granulations.

In such cases too frequently the nail is sacrificed. Scarcely any nail need be lost if patience be exercised, and if the soft tissues are pressed away from the nail while its side is elevated. This can be accomplished by using a blunt chisel-shaped instrument, with the aid of which we can carefully insert some absorbent cotton between the edge of the nail and the soft tissues. At the first dressing it may be impossible to insinuate the cotton along the entire side of the nail, but by patience and repeated packings a cure will often result from this simple treatment alone.

Should there be fungous granulations, the solid stick of nitrate of silver can be applied with advantage.

In most of the cases of incurvated toe-nail I prefer to replace the cotton by a piece of cork, which does not act unpleasantly upon the skin. The cork is cut so that a sharp hook-like edge may be pressed into the groove between the flesh and the side of the nail, while its body fits over the side of the toe, being kept in position by a strip of adhesive plaster surrounding both the toe and the cork.

When the nail is greatly deformed, and prevents a shoe from being worn with comfort, *evulsion* should be performed. In dispensary practice a nail is frequently removed when it could be saved, provided the patient would attend to the necessary dressings.

Evulsion of a nail is one of the most painful operations in surgery: therefore you should always administer an anæsthetic, preferably ether. Should the nail cling with unusual tenacity to the matrix, divide it in the middle by means of scissors and separately remove each piece.

By means of this curette I will separate this nail from its matrix, and then seize the inverted portion with dressing-forceps and wrench the entire nail from its bed. A piece of lint moistened with carbolized oil will now be applied, and on the second day a flaxseed-meal poultice, which will loosen the firmly-adherent dressing; after which carbolized oil will be applied each day.

When the new nail grows in, it will tend to assume the same deformity as the old. Should all efforts fail to correct the incurvation, it will be best to remove the entire nail and destroy the matrix by means of caustic potash. After such a procedure, dense fibrous tissue takes the place of the nail and protects the soft parts. I have never witnessed any evil result from this radical operation.

ATHEROMA AND ŒDEMA.

All physicians recognize the fact that certain diseases are prone to develop at different periods of life, and in this man, 65 years of age, we would naturally expect to find some marks of declining vigor.

For several years he has suffered in the winter-time from cold extremities. Several months ago he began to have cramps in his legs, especially the calf of the right side, and upon this leg he noticed a slight lividness of the skin, accompanied by slight puffiness of the foot and ankle.

These conditions gradually became intensified, until at present you see his leg is swollen as high as the knee. When I touch the limb, the tissues are found to be indurated and somewhat œdematous. The skin presents a dusky-red, mottled appearance, is inelastic, and is somewhat cooler than that covering the thigh. No serum escapes from the skin, no ulcer or eruption is present, and the veins are not varicose. He never contracted syphilis or had gout,

but has suffered to some extent from chronic rheumatism, and has used alcoholic stimulants in moderation. Arcus senilis, the ring of fatty material deposited around the circumference of his cornea, is well marked; his radial arteries feel inelastic and cord-like. His urine has been examined, with a negative result. From his history and symptoms a diagnosis of atheroma is readily made.

Atheroma is a disease of the arteries, seldom of the veins, and is marked by a peculiar degeneration. There are two varieties of the disease, the *senile* and the *premature*. The first is frequently observed in persons over fifty years of age; the second may begin as early as thirty years, and is usually the result of alcoholism. Males suffer more frequently than females, and the disease seems to be more common among the people of Great Britain and France than among the natives of the United States. The lesion is most commonly observed in the arch of the aorta and in the cerebral, coronary, brachial, radial, ulnar, iliac, and tibial arteries. When the cerebral vessels are implicated, apoplexy is liable to result.

Atheroma is marked by three stages,—infiltration, fatty degeneration, and calcification.

The deepest layers of the internal coat of the artery are generally selected as the point where the infiltration begins. From thickening of these layers, the tunica intima is pressed in the direction of least resistance in the shape of flat, irregular projections, which encroach upon the lumen of the vessel. This thickening is produced by multiplication of the cell-elements in the intima, some of which originate from active proliferation of the connective-tissue corpuscles, and others probably migrate from the vasa vasorum. Hardening of the tunica intima follows, with decreased nutrition, resulting in retrograde changes both of the new and the old elements, marked by fatty degeneration. If a diseased vessel should be laid open at this stage, it will present spots and streaks of yellow or light-gray color and will have a greasy feel. While this change is taking place in the intima, cell-infiltration goes on in the adjoining coats of the vessel, advancing to fatty transformation of the cells and changes in the intercellular substance of the connective tissue, resulting in a soft, pulpy material, called an *atheromatous abscess*. Finally, layer after layer of the intima becomes disorganized, and the broken-down, purulent-looking mixture is discharged into the blood-current. The opening which is formed, and which extends to the middle coat of the artery, is called an *atheromatous ulcer*. In advanced cases of atheroma all the coats of the vessel in turn become involved.

Following the fatty degeneration comes a deposit of lime-salts, or *calcification*, which is by no means uniform in extent. There may be numerous small grains, or, as I have frequently observed, large scale-like plates, giving the appearance of a tiled roof to the surface of the vessel. The deposit may encircle the artery in rings, which finally become united, making a tube almost stony in hardness. Examples of such a condition have been seen in the arteries of the extremities.

Any vessel invaded by atheroma soon loses its elasticity and firmness, dilates unequally, and may easily be torn.

Some difference of opinion exists in regard to the operation of causes in producing atheroma. In my judgment, the inflammatory origin of the disease is the most probable; also that alterations in the constitution of the blood and fluctuations in arterial strain are predisposing causes. Rheumatism, gout, and syphilis are agents in its production; but, in my experience, alcohol has been more actively concerned than all other causes combined, especially in the variety which I have termed "premature."

The calcified plates sometimes narrow the calibre of an artery to such an extent as to cause *thrombosis*, or the formation of a clot, at the constricted portion. Cerebral embolism may be caused by a little fragment of a clot becoming detached and being swept into the cerebral vessels. When thrombosis occurs in the vessels of one of the extremities, pain, loss of heat, numbness and stiffness of the limb announce the condition, which may terminate in gangrene. Atheromatous ulceration may open an artery and cause death from hemorrhage. Dilatation of arteries, hypertrophy of the left ventricle of the heart, false or dissecting aneurism, loss of temperature, cramps of the extremities, and mortification can be added to the evils which are apt to result from atheroma.

Now, what shall be done for our pa-

tient? As the vessels have been unable to control the circulation of the blood, œdema and formation of imperfect connective tissue have resulted. In order to give support to the vessels and remove these products, an elastic bandage will be applied from the toes to the knee. Each day it will be removed and the limb washed, as the rubber provokes considerable sweating. No remedies of which we have knowledge are capable of curing the existing disease. Much may be done palliatively by attention to all the functions of the body and directing the patient to lead a quiet life, in order not to excite the heart and cause increased arterial tension. As an article of diet, milk is supposed to be of special value, as the lactic acid which it contains may tend to limit the formation of lime salts.

FIBRO-LIPOMA OF THE HAND.

Between three and four months ago, this robust man, æt. 40, noticed an enlargement on the dorsal aspect of his left hand, at the distal end of the metacarpal bone of the little finger. The growth has steadily increased until it has become about half an inch in thickness by one inch both in length and width. It has not interfered in any way with the freedom of the fingers in working, and has been painless. The skin covering the growth is natural in appearance; while the tumor itself is insensible to pressure, has a soft, doughy feel, a somewhat lobulated surface, is freely movable, and has well-defined borders. When I firmly compress the mass between my thumb and fingers, you observe a peculiar dimpled appearance of the overlying integument. This is a very characteristic feature of lipomata, for we have to deal with a fatty tumor, which has selected a rather unusual locality. Bursæ or ganglions frequently are observed along the line of a tendon, but usually they are elastic, slightly painful on motion, and somewhat tender on pressure.

Fatty tumors exhibit a peculiar predilection for the back of the neck, the shoulders, the nates, and the inside of the arm and thigh. Frequently they are multiple, and then rarely attain any large size; but when single they may increase to great magnitude. When allowed to grow undisturbed, lipomata will insinuate themselves into every fissure at hand, so that the real size of such a growth may not be fully appreciated prior to the operation for its removal.

The hand has been thoroughly cleansed, and is being washed with mercuric chloride solution (1 : 1000). I have carefully dissected the growth from its attachments, and have not opened the sheath of the extensor tendon over which it was situated. Tendons are often very intolerant to operations, especially if the wound is an open one.

The tumor is composed of fatty and some fibrous tissue, constituting the *fibro-lipoma;* but in this growth the fibrous material is small in quantity.

Interrupted silver-wire sutures are now being used to approximate the edges of the wound, which will be dressed with lint moistened with carbolized oil, and the hand will be placed on a palmar splint.

TRANSLATIONS.

New Treatment of Yellow Fever.—Dr. Lienais, of Cape Haytien, read a paper before the Society of Medicine of Nantes, March 5, 1886, with regard to some new points in the treatment of yellow fever, in which he gives the details of a treatment which he had found efficacious. Accepting the doctrine of Freire, that the disease is due to bacterial infection (micrococcus xanthogenicus), he attributes the jaundice to an action of these micrococci upon the red blood-cells, destroying them by acting upon the hæmoglobin and producing a yellow substance, "hæmapheine" (of Gluber). This substance produces the yellow stain which has been attributed to bile-staining. The fibrin disappears also, and the blood, being more fluid, readily extravasates, causing passive congestions and multiple hemorrhages. Hemorrhage into the stomach gives the "coffee-grounds" appearance to the vomited matters. Congestion of the medulla oblongata brings on troubles of sensation and circulation and the hepatic lesions constantly shown at the autopsy. The author sums up his treatment as follows:

The tincture of the chloride of iron is given in doses of twenty to forty drops daily, and to aid its hæmostatic effect sulphuric-acid lemonade is also given. If there is much fever, quinine is given night and morning (fifty centigrammes, or gr. viij); bromide of potassium is given in

the early part of the night (gr. xxx); and a hot foot-bath is given night and morning. Citrate of magnesia may be given for headache. Food should be confined to a cupful of broth given two or three times a day. The order of treatment is as follows: at 3 A.M., the quinine sulphate; at 6 A.M., a pediluvium; at 7 A.M., a mild purgative; at 10 A.M. and at 6 P.M., the potion containing iron, and in the intervals the broth may be given; at 6 P.M., another foot-bath; from 7 to 9 P.M., the potassium bromide; and every two hours the face can be cooled with camphorated spirits. For drink, sulphuric-acid lemonade. In four or five days convalescence begins, and the patient gradually returns to his usual health.—*Gazette Méd. de Nantes*, No. 5.

Medicated Inhalations in Pulmonary Tuberculosis.—Dr. Renzi, of Naples, having made experiments with iodoform and terebene (one to twenty-five), from two to six drops every two hours, (2) iodine, volatilized in a steam bath (from six to thirty grains in a room), (3) sulphuretted hydrogen, and (4) sulphurous acid, obtained by burning sulphur, concludes as follows:

1. Inhalations of iodine and those of iodoform with terebene ameliorate the local condition and nutrition without modifying the fever, the diarrhœa, or the night-sweats.

2. Inhalations of sulphuretted hydrogen and those of sulphurous acid augment the general strength, improve nutrition, and increase the urinary secretion. The former has a special action upon respiration, diminishing its frequency and controlling cough. Fever, diarrhœa, and sweats are uninfluenced by it.

3. Until more experience is obtained, the author would place in the first rank the inhalations of terebene and hydrogen sulphide.—*Bulletin de Thérapeutique*, March 1, 1886.

New Observations upon the Etiology of Eclampsia.—At a meeting of the Société de Biologie, MM. Doléris and Butte communicated the results of some chemical and experimental observations upon eclampsia, made upon five patients. In the first four examined the authors found, in the ethereal extract of the blood treated with dilute acid, a crystalline substance, which was inorganic, or at least partly so, soluble in ether and in acidulated water, insoluble in water, very slightly soluble in alcohol, and which did not behave like a ptomaine as regards certain color-reactions. These crystals are toxic, and may kill rats and sparrows rather quickly, even in almost infinitesimal doses; the symptoms being first a stage of excitation, then a period of somnolence, followed by death in five or six hours. In the fifth case of eclampsia the crystals were not detected. In the first four the proportion of urea in the blood was not excessive, and was, moreover, considerably lower than in the last one, in which no crystals were found. This analysis indicated that the accumulation of urea in the blood is too slight to enable us to attribute to it a *rôle* in the pathogeny of eclampsia.—*Le Progrès Médical*, No. 9.

A New Method of Cultivating the Bacillus Tuberculosis. — At a recent meeting of the Paris Biological Society, Professor Nocard, of Alfort, stated that he had succeeded in cultivating the bacillus tuberculosis. On pursuing Koch's method, he arrived at negative results. He therefore modified the cultivation-medium by adding one per cent. of peptone to horse serum, 0.25 of sugar candy to a hundred parts of serum, and the same proportion of sodium chloride. These additions were made before gelatinization was effected. The first three cultivations were made according to this method; the fourth was effected in pure serum of horses' blood, but the process was slower. M. Vignal pointed out that the addition of sugar, sodium chloride, and peptone to serum indicated a completely new medium of cultivation.

Pruritus Vulvæ.—In addition to appropriate systemic treatment, when indicated, local applications of hot water by sitz-bath or douche are recommended, followed by an application of the following:

℞ Amyli glyceriti, 30 grammes;
Zinci oxidi, 6 grammes;
Potassii bromidi, 10 grammes;
Ext. cannabis indicæ, 2 grammes. M.

When acne accompanies the pruritus, the application night and morning of black soft soap for half an hour, followed by douche of water, and then by a lotion of strong infusion of black tea, has been tried with satisfactory results.—*Gazette de Gynécologie*, No. 4.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, APRIL 17, 1886.

EDITORIAL.

THE SUPPRESSION OF ILLEGAL MEDICAL PRACTICE.

A PAPER was read by invitation, this week, before the Medical Jurisprudence Society, by Dr. J. F. Edwards, the energetic chairman of the standing Committee on Hygiene and the Relations of the Profession to the Public of the County Medical Society, in which an account was given of the steps which have been taken during the past year to suppress illegal practice in Philadelphia.

The work which the Committee has done in this direction is too important to be allowed to pass unnoticed. A graceful acknowledgment of appreciation of the work already accomplished was given by the unanimous vote of the County Medical Society, at its last meeting, to devote the initiation-fees of the present year to the uses of the Committee in prosecuting illegal practitioners of medicine in Philadelphia County. The policy of the Committee has been, except in flagrant cases, not so much to bring illegal practitioners into court for the sake of securing conviction, but rather to hold the offender before a magistrate and effect a compromise by which he agrees to discontinue his practice, the suit being suspended during good behavior. The details of several such cases were given by Dr. Edwards in his report to the Medical Jurisprudence Society, and the practical wisdom of the course pursued by the Society was fully exemplified by the results obtained. By this means the Committee is likely to attain in a great measure the end in view —the suppression of illegal practice in this city—with the least expenditure of money and effort, and without exciting public sympathy for offenders by enabling them to raise the cry of persecution.

THE QUESTION OF ABDOMINAL SECTION FOR ACUTE INTESTINAL OBSTRUCTION WHEN COMPLICATED WITH PERITONITIS.

THE epidemic of laparotomy, which is said to rage among the gynæcologists, has at least the compensating virtue of encouraging operations upon the peritoneal cavity in general surgery, which have led to brilliant successes. The taboo has been taken from the peritoneum, as it had been from the pleura, and the fact has been demonstrated that with proper management the peritoneum is remarkably tolerant of manipulation and injury. The existence of acute general peritonitis, even, does not act as a bar to the operation of laparotomy, provided that the attendant circumstances demand it. A case was shown at the Clinical Society of London, by Mr. A. E. Barker, which illustrated this point. The patient, a man twenty-three years of age, while in a condition of complete obstruction of the bowels and acute general peritonitis, had abdominal section performed and an intussusception of the ileum reduced; the inflammatory products were then mopped out of the peritoneal cavity with sponges moistened with carbolized water, and the wound was dressed with salicylated cotton and iodoform. The acute symptoms were immediately relieved by the operation; the good results being attributed in part to the previous treatment by opium and enemata, the comparative state of rest in which the bowels were placed, and the performance of the operation at the earliest possible moment when it was evident that other means had failed. Mr. Bryant, complimenting Mr. Barker upon the success of his treatment, stated that he did not consider the peritonitis a bar to the operation.

PRESCRIPTIONS IN COURT.

IN the case referred to in the last issue of the *Times*, in which Dr. Carl Seiler was sued for condemning a proprietary medicine in his address delivered at the College of Pharmacy, Judge Arnold, after hearing the plaintiff's case, directed the jury to bring in a verdict for the defendant. Two interesting points were made in the charge to the jury. In the first place, it was declared as the law of Pennsylvania that a scientific lecture before students or a medical association is not only privileged, but a highly-privileged communication, and that malice must be shown to exist in order to render the lecturer liable for an expression of opinion under such circumstances. Secondly, a druggist having been subpœnaed to bring some of Dr. Seiler's prescriptions into court, the judge decided, without opening the question of ownership, that they could not be made public, as they were essentially confidential and private communications to the druggist.

Judge Arnold also held that the plaintiff's attorney had no right to publish the weaknesses or maladies of patients of Dr. Seiler, and refused to allow him to examine the prescriptions. This was clearly a just ruling; for if innocent persons could be held up to ridicule or criticism whenever an attorney demands that a druggist shall produce his prescription-file to be examined and commented upon in open court, it might ruin the business of the apothecary and seriously hamper physicians in their professional duties.

REPORTING CONTAGIOUS DISEASES.

BY Act of Assembly it is the duty of physicians to make prompt returns of all pestilential or contagious diseases to the health officer. A circular has been issued by Major M. Veale, Health Officer of Philadelphia, calling attention to the fact that the Board of Health, by resolution, has designated the following diseases to be reported, under a penalty of fifty dollars for neglect to comply fully and promptly with the law: Asiatic cholera, relapsing fever, typhus, cerebro-spinal meningitis, variola and varioloid, scarlatina, diphtheria, and typhoid or enteric fever. Blank forms have been provided, and official envelopes (not requiring stamps), which will be furnished upon sending or writing to the health officer.

By the prompt attention of physicians to this duty of reporting contagious and pestilential diseases, the work of the health board will be greatly facilitated. An officer has been appointed to make sanitary inspection and to disinfect premises where contagious diseases exist, and a physician may render valuable service to the community by indicating where disinfection is needed. This notice is thought necessary, since many physicians are unfamiliar with the requirements of the law, and are not aware that it is just as obligatory to report typhoid or scarlet fever as smallpox or cholera.

PHYSICIANS REQUIRED TO REGISTER IN THE PLACES WHERE THEY REGULARLY PRACTISE.

AN interesting case under the registration law came last week before the court in Lebanon County. The defendant, who was practising part of his time, and had an office, in Lebanon County, was arrested for non-compliance with the act of 1881, and pleaded a registration in Berks County as conferring upon him the right to practise anywhere in the State of Pennsylvania. Judge McPherson, before whom the case was tried, ruled that the defendant had a residence in Lebanon County within the meaning of the act requiring physicians to register their diplomas with the prothonotary of the county in which they reside, and imposed a heavy fine upon him because he had not also regis-

tered in Lebanon County. The case has been appealed, and will probably come before the Supreme Court for its decision whether or not a physician is required to register his diploma in more than one place when he practises regularly in several.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

PASTEUR'S Experiments.—Europe is so much taken up with M. Pasteur's work that it is impossible not to mention it again in writing from Paris. The English House of Commons has considered the matter, and has declared that "the recognized eminence of M. Pasteur as a scientific investigator justifies a careful examination of the results obtained by him." Vienna also comes forward with a proposal of the Princess Metternich that medical men should be sent to Paris to study the new method of treating hydrophobia; while the Hungarians have already sent two doctors here.

In Italy and elsewhere large sums are being raised towards the "Pasteur Institute" which was formed at one of the late meetings of the Academy of Sciences. A committee has been appointed to open a public subscription to found a permanent establishment in Paris to be called after M. Pasteur, and to be devoted to the treatment of all persons, French or foreign, who may have been bitten by mad dogs or other animals. The principal government officials and the heads of the Bank of France and Crédit-Foncier will receive subscriptions. Already a very large sum has been raised, so that the success of the enterprise seems assured.

The American colony has organized a banquet to M. Pasteur, at the Stanley Club, for April 14, which will be presided over by our minister, Mr. McLane. M. Pasteur himself was very warmly applauded at the late meeting of the Academy when he announced that his treatment had been attended with happy results in three hundred and twenty-four out of three hundred and twenty-five cases. The single fatal issue was due to the fact that his services were called for too long after the accident. In his speech, curious details were given of some of the cases treated. One, a very convincing test of the mode of inoculation, was that of a boy named Jullion, who lives in Paris. He was set upon by a large and furious dog, and commenced to scream out, and the animal's lower jaw entered his mouth and tore the child's upper lip open, and the dog's fangs entered deeply into the palatine bones; at the same time the poor boy's nose and eye were injured by the dog's superior maxillary teeth. Here was a case in which cauterization was impossible, and the dog, on being killed, presented all the signs of rabies. This happened on the 30th of November, and the boy to-day is all right after the treatment. Among the number treated were several from other countries,—a Dr. John Hughes and others from England, the children from Newark, America, etc. M. Pasteur said he thought "that it would be all that is needed to have an international hospital here in Paris, as he had treated patients from New York and far countries in Europe." His closing words at the Academy deserve perhaps more attention from medical men than his treatment of hydrophobia, which, after all, they are not often called upon to treat. He said, "It seems to me that what takes place in rabies ought to have analogous consequences in other maladies, and it will be well to see if, for instance, diphtheria cannot be treated according to the same principles." It will indeed be a great thing if M. Pasteur, who is not a doctor, can show us how to cure diphtheria.

Researches into the Prevention of Phthisis.—Another matter that deeply interests us is Professor Verneuil's effort to raise a fund for special researches and experiments to discover a means of preventing that terrible disease, phthisis.

Although the experiments are not to be made in any single direction, it may be inferred that Dr. Verneuil counts principally on a system of inoculation of the malady to render the patients refractory to the disease, similar to that practised with so much success by M. Pasteur. However hopeless the task may appear to all, the attempt deserves to be encouraged, and it is to be hoped that Professors Verneuil, Cornil, Bouchard, and others who have taken the work in hand will not be embarrassed for want of funds.

Following the same subject, at a meeting of the Conseil d'Hygiène last week a committee was appointed, including Professors Trélat and Proust and Dr. Dujardin-Beaumetz, who were charged to make researches to see what could be done to stop the development of pulmonary phthisis.

The following resolutions were adopted:

1. The most active agent in the transmission of this disease resides in the sputa.

2. Care must be taken not to allow this expectoration to be thrown on the ground nor on linen, where it may be transformed into dangerous dust.

3. We recommend, therefore, that patients be instructed to spit into utensils containing sawdust, and that these are to be emptied and washed once a day, and their contents are to be burnt.

4. Any room which has been occupied by a phthisical person should, after his death,

be disinfected with sulphur before it is again occupied, and all linen must be steamed.

How to Prevent Colds.—Dr. Brown-Séquard, speaking at the Société de Biologie, gives a prophylactic method against accidents that are produced by cold. He said, "The neck is one of the most sensitive regions of the body, and it is not doubted by any one that a large number of cases of bronchitis, etc., are reflex phenomena from the impression of cold on the nerves of the skin in that region. To prevent these troubles, the sensibility to cold must be diminished: that is the best means that can be indicated. To this end I have advised several of my patients to blow air on the neck from a blower, at first using warm air and gradually cooling it off. In ten sittings most of them had become so accustomed to it that they became quite impregnable to the action of cold." [In America, water is generally used instead of air for the same purpose.]

Paris Theses—Abortive Medication.—In a former letter we gave some account of the *concours* now going on for the places of Professor (*agrégé*) of Medicine. The trial is now coming to an end, and the candidates are publishing their theses. As they have hunted up almost everything that is printed on the subject given, some extracts will no doubt be interesting. The first one we read over was by Dr. De Beurmann, on "Abortive Medication." It is defined as a medication that proposes to interrupt the malady at the moment of its natural evolution. In a general way this should always be our object; but, as we have as yet but very little real knowledge of the cause and nature of disease, abortive medication is still in its infancy. The day that pathogenesis becomes a precise science, then abortive medication will dominate all other forms. It is towards the coming of this sort of rational therapeutics that all should bend their efforts, and it is for the same reason that all are at present following out the pathogenic problem. To prove the legitimacy of these hopes, M. de Beurmann passes in review some of the diseases against which abortive medication has been directed with the most effect. One of the most striking examples of the efficacy of such medication is taken from ocular pathology: purulent ophthalmia in new-born children is cured at once by the first cauterizations made with nitrate of silver wash, in a dose of eight grammes to one hundred grammes of pure water. This action of nitrate of silver is explained by the fact that the salts of silver act very energetically on all the inferior organisms, so that the gonococcus of the conjunctiva is rapidly destroyed by the caustic.

The same medication acts in a similar way in blennorrhagia, but the caustic injection used in such cases does not act so well, because it cannot penetrate entirely to the depth of the urethral follicles. In passing, here we might also notice Dr. Le Fort's mode of aborting a furunculus: when he can get the blind boil in its first stage he gives it a very deep lancet-cut, and this often cures, but if it have already taken on much inflammation it is too late and it must open. The eradication of malignant pustule is in the same way very efficacious. Here profound cauterization is made, followed by injections of iodine; but it is probable that success principally depends on the resistance of the human organism to the infecting agent. The interesting question of syphilis-abortion receives its share of attention; but, while M. de Beurmann thinks that mercury acts on the specific virus, he is not prepared to say that the real pathogenic agent has as yet been discovered for this disease. Tuberculosis only opens the door on one side to the method of abortive medication,—that is, where it is localized,—but the results are good in anatomical tubercules, lupus, cold abscess, etc. It is true that it is doubtful if the cures made will prevent general infection, but nevertheless the distinction should be made between local and curable cases and general and mostly incurable ones. In puerperal infection antiseptic injections (intra-uterine) have made a number of successes. The recent results obtained prove that rabies can be aborted. Pneumonia is one of the affections that has been so often the seat of experimentation that we all know the method by the use of tartar emetic. Broussais advised bleeding, which was pushed to an extreme. Recently cold baths were advised and are still used in Germany. M. Lépine has just tried a new method, which consists in making antiseptic injections directly into the lung through the walls of the chest; but this method is as yet too new to be judged. Typhoid fever has not been actually aborted, by any means, but to approach the rational method the nearest M. de Beurmann advises the method followed by Professor Bouchard: that is, *general antisepsis*, by giving pills of calomel (forty centigrammes in twenty-four hours), and then *intestinal antisepsis* by the ingestion of glycerin mixed with charcoal which is iodoformed; naphthaline is also given in doses of five grammes a day. Against articular rheumatism there is a real abortive medication, salicylate of soda, but its action is not at all well established; at the same time it must be considered as well as mercury in syphilis and quinine in fever as an abortive agent, because it acts against the pathogenic agent.

"*Toxic Paralysis.*"—This is the title of another paper by one of the aspiring professors,—a Dr. Brissaud. He states that the real toxic paralysis is caused by some mineral, vegetable, or animal substance, and it is characterized clinically by muscular resolution and anatomically by peripheric lesions. In a general way, it in most cases affects some of the muscular groups, and mostly those of the

members. The legs are invaded first, except in saturnism, which is known by the manifestation in the forearm muscles. It may be added that it is the extensor muscles that are attacked almost constantly. The abolition of all tendon-reflexes is the rule also in toxic paralysis, and if the disease runs on several weeks muscular atrophy comes on.

Charcot has shown that there are three orders of muscular alterations, which consist histologically in a proliferation (interstitial) joined to a degeneration of the proper elements of the contractile substance. Taken separately, these troubles present certain characters which are interesting to study.

Alcoholic Paralysis is always accompanied by sensory and psychic troubles which are of great importance, so that the whole of the symptoms are those of chronic alcoholism, in which the paralysis is only one symptom that has its rank with the others. The general character of this toxic paralysis is, that it attacks the *lower limbs* in preference, it is localized in the extensors and gives a certain predominance to the flexors, so that a certain attitude results which has given rise to the expression of alcoholic pseudo-tabes. It differs decidedly from what is observed in real tabes; but any doubt of it will soon be cleared up by the subsequent course of the malady: in the tabes case the disease will continue its slow march, while in the alcoholic case it will usually improve under treatment.

The medical treatment is—first, the removal of the poison, whatever it may have been, and, secondly, avoidance of the further absorption of the poison, and, locally, stimulation to the muscular contraction by electricity in the static form and by massage.

Ptomaines and Microbes.—The discussion on this subject continues at the Academy of Medicine. M. Colin (of Alfort), the distinguished physiologist, read a paper in which he proposed to establish that it is not possible to attribute to microbes only the production of septic and morbid states in the human body. What made him doubt that microbes were the cause of disease, and even to think that their importance was greatly exaggerated, was the fact that they are always associated with other matters which are very toxic in their action, and which will produce death in animals if injected into their skin or if they are made to swallow them.

If this could be done with pure vibrios that have been isolated and given in pure water, M. Colin said he could then understand it; but this cannot be done. Again, in plenty of virulent diseases no bacteria are found, and every symptom passes just the same as when they are present. Microbes do not exist in the virus of rabies nor in vaccine, and, indeed, it is not at all sure that they are present in cholera and typhus. Then, what makes M. Colin doubt still more is that they are found in plenty of the diseases that are *not virulent* and *not transmissible* by inoculation: so that here they cannot be in any way the living agents of contagion. Everything considered, it seems that not one of the *rôles* attributed to these microscopic beings can be proved. Even if those found in *charbon* seem to be the real agent, we have no right therefore to draw a conclusion that all diseases are so derived from some microbe.

After all, who has shown that they can give proofs of the part acted mechanically, chemically, and physiologically, that is attributed to these microbes? Who can show that they embarrass the circulation, when they are smaller than the smallest *débris* of the white globules, that has no difficulty in passing on in the vessels? Who can show that they absorb oxygen from the blood when they are called anaerobies? How do they know that they manufacture ptomaines or any other poison? No one can find them. Has any one shown that they secrete the ferment? No. In place of giving demonstrations they bring us simply some hypotheses. We must no longer think of miasms, nor putrid matters, nor virus, nor alteration of the blood, nor deleterious gases: no, if they don't find the microbe, they suppose its existence. They don't see it enter the economy, but assert that it does so. The power of the living cell, which *we can see*, and its protoplasm, must give way before the omnipotence of the bacteria. M. Colin said it seems that we had better attach ourselves to obscure points in pathology, and clear them up, in place of taking up time in studying any one of the elements, microbes or the poisons. None of them can give the reason for the pathological facts that we are ignorant of. Suppose the body does produce poisons; well, it also knows how to preserve itself from them in destroying them and in eliminating them, even if it is saturated with those that may come from respiration, secretion, or nutrition. It also resists all sorts of microscopic beings that come in with the water and every mouthful of food we take.

Professor Cornil, who is the apostle of the other side of the question, read a work of M. Doyen (of Rheims) relative to various diseases claimed to be of bacterial origin. He said, "For five years I have made a study of a large number of suppurations and different septicæmias, and find that they are all due to a direct and local action of pathogenic microbes. Phlegmon and all such suppurations (whitlow, etc.) are characterized by the presence of different microbes (*Staphylococcus aureus* and *albus*, and *Streptococcus pyogenicus*, etc.). The same thing occurs in putrid abscesses, and in the pustules of acne, etc.; I have always found the blood to contain these organisms at autopsies, and I have never been able to attribute any septicæmia to the action of ptomaines. It is difficult to

explain the mode of action in this infection. A fistulous opening may be suspected, for instance, in the leg, but auto-infection is not to be admitted. I have a patient at present who is attacked with a purulent affection from a slight cut in his finger. Without doubt he got his streptococcus from the air, or from the cattle he was taking care of. Puerperal fever is only a variety of septicæmia, and has always one of three kinds of microbe, and they are those that are found everywhere in the air and in certain liquids that are decomposing. If all wounds suppurate easily, even in the country, it is owing to some form of microbe, and enough will be found in the vulgar dungpile to eternalize any disease that may be contagious. The injections made of the broth from putrefied meat which produce death do not prove that it is exclusively the ptomaines that act."

Professor Cornil added that he thought that puerperal fever was not a single affection. We find that some are the result of pyæmia, and the autopsy will show a subacute peritonitis, or even a pleurisy. Others are real intoxications of the whole organism, determined by bacteria and by the toxic alkaloids formed by their influence. The micro-organisms penetrate by the uterine wound, and they produce their action accordingly as the pregnancy has modified the uterus and troubled the human body.

Death of a Savant.—The death is announced of Dr. Bouchefontaine, the chief of M. Vulpian's laboratory at the Hôtel-Dieu. He was a determined adversary of the theory of contagion by bacilli, and during the panic, a year ago, about the cholera, we wrote about his practising a very repulsive experiment on himself, that of swallowing some of the famous cholera bacteria, to support his arguments. It did him no harm, and he has since tried all sorts of hardy experiments on himself with various drugs; and it is possible they may have hastened his death, owing to the frequent ordeals to which he submitted his stomach in the interest of science. He was only about forty-five years of age. We have also to announce the death of Dr. William E. Johnston, a well-known American physician of Paris, where he had practised for some twenty years. He was always welcome at every gathering of Americans, and is deeply regretted.

The "Congrès Français de Chirurgie" will hold its second session in Paris from the 18th to the 24th of October, in the large amphitheatre at the Faculty of Medicine. The principal questions that are on the order of the day are — Nature, Pathogenesis, and Treatment of Tetanus; Nephrectomy; Orthopædics; Resections; Operative Intervention in Irreducible Luxations, etc. All papers must be sent in by the 15th of July next.

THOMAS LINN, M.D.

PARIS, FRANCE, March 15, 1886.

WASHINGTON.

WASHINGTON, April 3, 1886.

AT the last meeting of the Naval Medical Society, which was held at the Museum of Hygiene on the 1st instant, Medical Director A. L. Gihon read an interesting paper on "Kola as a Therapeutic Agent." Through the courtesy of the author of the paper, I am enabled to give the following information about this new remedy.

The kola of commerce is the seed of the fruit of the *Sterculia acuminata*, a tree from thirty to sixty feet in height, indigenous to the west coast of Africa and the neighboring territory between Sierra Leone and the Congo. The ripe fruit is a brownish-yellow pod, from three to six inches long and about two and a half inches wide. This pod contains from five to fifteen red or white seeds, each weighing between five and twenty-five grains. The tree flowers continuously, and the nuts are collected twice a year.

Among the most singular of the properties of kola first brought to notice was that of clarifying and improving beer and spirits. Heckel and Schlagdenhauffer attribute to it the further property of purifying foul water, and of rendering tainted meat edible.

The physiological effects attributed to the drug are somewhat similar to those ascribed to coca. Its use is said to enable the natives of the west coast to endure prolonged exertion and upon a mere modicum of food, while the whites living among them believe they escape the deleterious influences of the climate by chewing a small quantity before their meals. The negroes themselves consider it a sure prophylactic against dysentery. Among the men on the estates and in the garrison-towns of the West African settlements, kola has the apparently well founded reputation of dissipating the effects of an alcoholic debauch. From what is now known of its therapeutic properties, it is undoubtedly true that it does overcome the stupefaction and confusion of intellect which follow drunkenness. It is even maintained that it destroys the appetite for alcoholic drinks, and that after the use of the kola cure a drunkard cannot return to his cups for some days without being nauseated. Finally, the natives believe it to possess aphrodisiac powers.

The kola-nut plays an important and interesting *rôle* in the social life of many of the African tribes. The following particulars are given in a paper contained in the *Pharmaceutical Journal*. An interchange of white kola between two chiefs is indicative of friendship and peace, whilst the sending of red kola is an act of defiance. An offer of marriage is accompanied by a present of white kola for the prospective mother-in-law; the return of white kola signifies acceptance, while red means rejection. The absence of kola from among the marriage-pres-

ents would tend to nullify the agreement. All oaths are administered in the presence of the seeds: the negro stretches out his hand over them while he swears, and eats the seeds afterwards. No explanation has yet been given of the curious part played by kola in these hymeneal and testimonial transactions; but Dr. Gihon offers the suggestion that the reputed aphrodisiac property of the seeds and their resemblance to the testes make it probable that the ancient Hebrew custom of "putting the hand under the thigh" and swearing upon the testes as witnesses is here more decorously symbolized.

In the form of "kola-paste," which much resembles chocolate, but has a less agreeable odor, it is now found in the market. A specimen of this was placed in Dr. Gihon's hands by the Surgeon-General of the Navy, who desired observations upon the therapeutic effects of the drug. Dr. Gihon administered it to a case which is described as presenting the group of symptoms designated collectively as neurasthenia. The patient was a lady whose nervous equilibrium had been very seriously deranged, and who suffered with excruciating headaches, attended with nausea, loss of appetite, great despondency, insomnia, palpitation of the heart, intercostal neuralgia, and perturbed secretions. Under the use of the remedy these symptoms, which had resisted the previous exhibition of quinine, arsenic, iron, bitter tonics, guarana, and diffusible stimulants, quickly disappeared. The headache, which had been recurrent after temporary relief, did not return; the appetite was recovered, muscular vigor regained, and the mental dejection markedly relieved. The patient enjoyed refreshing sleep, and the secretions became normal. The remedy produced neither gastric disturbance nor constipation, which had followed the previous use of chocolate.

The method of administration of the remedy was similar to that of chocolate. The paste was triturated with sugar and dissolved in boiling water, making, with the addition of a sufficient quantity of the ordinary vanilla flavoring extract to cover the somewhat disagreeable odor and taste, a rather pleasant beverage. It was taken hot, in doses of ten to fifteen grams of the paste twice a day, between breakfast and luncheon, and again between the latter meal and dinner. If the decoction is allowed to cool, a yellowish gum separates, which is not dissolved on reheating, and which is extremely unpleasant. The trituration must be thorough, to avoid grittiness and imperfect solution.

The remedy deserves a more extended trial in cases of this character, which are confessedly so difficult to bring under the influence of therapeutic agents.

The sixth and last volume of the "Medical and Surgical History of the War" has just been completed by Dr. Charles Smart, surgeon United States army, who has been constantly engaged on this work during the past two years and nine months. The volume, which is already in the hands of the printer, will contain between eight hundred and nine hundred large quarto pages, and will be abundantly illustrated with chromo-lithographic plates, photographs, cuts, maps, diagrams, and tables. The work is divided into chapters on paroxysmal fevers, continued fevers and allied diseases, diseases of exposure (such as pleurisy, bronchitis, rheumatism, etc.), eruptive fevers, miasmatic fevers not included in the above classes, scurvy, local diseases (of the heart, lungs, kidneys, liver, etc.), unclassified diseases (nostalgia, army itch, alcoholism, venereal diseases, etc.), and a section on the general hospital system developed during the war. This traces the gradual evolution of the pavilion hospital, as it was when the war ended, from the imperfect beginnings of 1861. Some of Dr. Smart's diagrams which I had an opportunity of examining are most interesting. For example, the prevalence of venereal diseases is shown to depend very largely upon opportunity. In the beginning of the war a considerable percentage of the diseases reported were of this class. This gradually declined to an insignificant proportion until 1864, when there was a sharp rise, again declining until about the middle of 1865, when the line runs up almost perpendicularly to the top of the chart. The explanation is that in 1861, before the recruits were sent into the field, Venus vulgivaga plied her trade with success among the patriotic hosts who had responded to the call for "three hundred thousand strong." After the actual business of war began, no opportunity was furnished for the communication of the diseases of the sexual organs until the first enlistment of the three-year men had expired, when the thirty days' furlough and a good supply of cash enabled those who re-enlisted to pay up for their enforced continence by excesses the effects of which were manifest in the rise of the morbility line in 1864. Another period of active field-service was again accompanied by a decline in the venereal-sickness-rate until near the final muster-out, when, with well-filled pockets and a light heart, "Johnny came marching home."

The curve of typhoid fever shows similar interesting features, which are all clearly discussed by the talented author.

A bill providing for the establishment of a Bureau of Public Health, under the control of the Interior Department, has been favorably reported to the House of Representatives by the Committee on Commerce. The bill provides for the appointment from civil life by the President of a Commissioner of Health, at a salary of four thousand dollars. This official shall collect various sanitary information from foreign and domestic sources, and

disseminate the same among the health authorities and others in this country; frame rules for the instruction of consular officers and medical officers serving at foreign ports; notify local quarantine authorities of the anticipated arrival of infected or suspected vessels; "make investigations, both in the United States, and, if necessary, in foreign countries, into the nature, origin, and prevention of contagious and epidemic diseases, as well as the causes and conditions of particular outbreaks of disease in the United States; and shall publish and distribute documents relating to the prevention of disease." Officers from the several departments of the public service may be detailed by the President for duty in the Bureau of Public Health, or, when a detail of suitable officers cannot be made, civilian experts may be employed.

Seventy-five thousand dollars are appropriated to carry out the provisions of the act, which, if adopted, legislates the National Board of Health out of office.

The bill seems to have a fair prospect of passing, since it has the endorsement of the Committee on Commerce, and is in the special charge of Dr. Davis, of Massachusetts, a member of that committee.

The quarantine and local interference rocks upon which the National Board was wrecked seem to have been very carefully avoided in the drawing up of the present bill. No antagonisms have yet been developed; but it remains to be seen whether the officials now in office who may be affected by the passage of the bill will permit its adoption without a struggle.

The retirement of Surgeon-General Murray, of the army, next August, is already the occasion of considerable speculation concerning his probable successor. The ranking officer in the Medical Department is Dr. J. H. Baxter, chief medical purveyor; but Dr. Sutherland, whose name is also prominently mentioned, has been longer in the service. The choice will probably be made between these two.

The quarantine against smallpox on the Canadian frontier has been raised.

G. H. R.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MARCH 4, 1886.

The President, B. F. BAER, M.D., in the chair.

MENSTRUAL EPILEPSY.

DR. HOWARD A. KELLY exhibited recent specimens of tubal and ovarian disease removed within the past two weeks. The first specimens to which he called attention were removed from a patient 21 years of age, who has suffered from an aggravated menstrual epilepsy from the very first appearance of the function. There was no difficulty whatever in the removal through a small incision into which two fingers could just be slipped. The whole operation from beginning to complete closure took but twenty-four minutes. The right ovary was deformed by a very prominent nodule, about one and one-half centimetres in diameter, which burst on removal, discharging a watery fluid, and was shown by its lining membrane to be the last corpus luteum.

The second specimens are rare examples of

HYDROSALPINX WITH CONGENITAL DEFICIENCY OF TUBES AND BROAD LIGAMENTS.

In this case there was malformation of the distal ends of the tubes, broad ligaments, and ovaries. The left tube is as large as a bologna sausage. It was brought into view with great difficulty after separating many light adhesions to the pelvic walls; while the isthmus is much enlarged and thickened, the great distention is at the involuted ampulla. The operator was materially assisted in bringing this tube into view by upward pressure on the cervix by a hand in the vagina. The fimbriated extremities were lost in a mass of vascular and fibrous tissue forming a broad ligament, and deep down in this were embedded the somewhat hard, elongated, large ovaries. It was utterly out of the question to attempt a removal of the ovaries, and any such operation would have been of a very desperate character. Nor did he (Dr. Kelly) regret this in the least, as he had planned his operation for *tubal* disease, to which he attributed all the patient's sufferings. The right tube was as large as his middle finger, and was also distended with watery fluid.

The other specimen is a very large

HÆMATOSALPINX.

This tube, the left, about four inches long, burst as he was removing it, discharging four ounces of tarry blood. It was very adherent, having several attachments to intestine and omentum. The dilatation is here, too, seen to be at the ampulla, which extended far beyond the ovary back into the cul-de-sac. The ovary is embraced by the isthmus, and presents a curious appearance as it lies, about twice the normal size, embedded in a sort of ball-and-socket manner below the isthmus. Where it is laid open, the tube is converted into one large sac.

Dr. W. C. GOODELL had been surprised at the size of the tubes.

Dr. JOSEPH PRICE remarked that the tube was so large that the uterus had been pushed aside by it. Great care was required in its removal.

Dr. CHARLES HERMON THOMAS said that some time since he should not have recognized such a condition, but now he can,—the result of experience in bimanual examination. He would like to hear further on this point of diagnosis.

Dr. B. F. BAER thinks it very unfortunate that the ovaries as well as the tubes could not have been removed in the case just reported by Dr. Kelly, for their presence will probably result in the usual monthly congestion, and consequently the pain and other pelvic distress, for the relief of which the operation was performed, may continue to exist. There are several cases on record in which the tubes were removed and the ovaries allowed to remain, but the results have not been reported.

He can see no reason why this should be done, unless the ovaries cannot be found or some other insurmountable difficulty presents itself. He fully believes in the advantages of prolonged and thorough palliative treatment in these cases. Benefit usually follows, and sometimes cure; at least, operation is rendered less difficult and more likely to be followed by recovery of the patient both from the operation itself and the symptoms. Certainly the application of remedies such as iodine to the fundus of the vagina and the interior of the uterus, with prolonged rest and general building-up of the system, will have a strong influence in attenuating adhesions, promoting absorption of lymph, and possibly (if not probably) in cure of the patient without operation.

It should not be forgotten that removal of the tubes and ovaries in these cases does not cure absolutely in every case. He believes that we will be called upon in a few years by many of these cases which have been operated upon to relieve symptoms which still exist or have returned, and for the relief of which operation had been performed; just as we have been called upon from time to time and pestered by these old cases of chronic hypertrophy and retroflexion of the uterus with pelvic adhesions. He has now under his care one of his own cases, upon which he operated for the relief of symptoms the result of disease of the tubes and ovaries with pelvic adhesions. The patient made a good recovery and appeared to have been cured; but the symptoms have returned, and she is now complaining almost as much as before the operation. She also has periodical attacks of metrorrhagia. This, of course, is an unusual case. He has another patient under his care who was operated upon in a neighboring city by removal of the tubes and ovaries, and is treating her for the same symptoms of which she had complained before the operation. He is an advocate for the operation in some cases, but he pleads for due deliberation and the exhaustion of careful palliative and preparatory measures before operation is resorted to. Many cases will get well without operation; some will not be benefited by operation; and there is some danger in laparotomy, although Tait has had such remarkable success.

Dr. J. C. DA COSTA inquired if Dr. Kelly had tried the benefits of rest and treatment before operating.

Dr. JOSEPH PRICE said that the recurrence of symptoms seemed to indicate partial removal of the tubes and ovaries. One of the fundamental rules of surgery is to seek for pus when it is probably present, and in all cases to remove it if possible. When the ligatures will cut through the tubal stump on account of its cheesy character, hemorrhage may be prevented by the application of the cautery.

Dr. KELLY, in closing the discussion, said he did not in the least regret that the ovaries could not be removed, as he had operated for tubal disease and not for ovarian, and he admired the zeal of Schroeder, who, instead of always removing the ovary, sometimes resected diseased portions. In all the cases of tubal and ovarian disease upon which he had operated, months and years of careful treatment had been wasted, and now, where he diagnosticated pyosalpinx, the only delay he allowed was to put the patient in the best possible condition for operation. Topical, external and internal, treatment is utterly futile, and never does more than secure temporary palliation.

Dr. Kelly's reliance regarding diagnosis lay entirely in a skilled bimanual examination, by which he always accurately mapped out all the peculiarities of the case before operation. If there is rigidity and resistance, it is necessary to etherize; but he has yet to see the case, where the presumptive signs were those of tubal and lesser ovarian disease, where the structures could not be picked up between the two hands and outlined. He considers that this tact has been largely developed by persistently examining the condition of the appendages to the utmost possible extent as a routine practice in all cases which come under his notice. Introducing the finger as high as possible, by forcing the hand well under the pubic arch and carrying the sensitive pulp up against the post fornix or either lateral fornix, and then playing up and down with the other hand pressing on the abdomen, and creeping a quarter-inch at a time without ever fully relaxing, and letting structures in between roll through the two fingers, and, in case of an ovary, running around its whole periphery, or of a tube, tracing it up to the cornus uteri and down into the retro-uterine pouch, where it generally terminates,—give often most surprising results, and would doubtless, if universally carried out, change hundreds of diagnoses of leucorrhœa, endometritis, and flexions with adhesions to the far more serious ones of pyo- or hæmatosalpinx.

PYOSALPINX.

Dr. JOSEPH PRICE exhibited specimens of pyosalpinx from two patients, and afterwards remarked that Tait and Keith have ended the dark period by showing us how to operate on the abdomen and pelvis without fear and with little risk. The wonderful advance in pelvic and abdominal surgery should be placed to their credit. He believes it is now universally admitted that they have reached the very acme of perfection. One surely must be a convert to Tait's law to contend with the great difficulties in pelvic surgery: "That in every case of disease in the abdomen or pelvis in which the health is destroyed or life threatened, and in which the condition is not evidently due to malignant disease, an exploration of the cavity should be made." Standard works on ovariotomy dwell at great length on the subject of adhesions, as the most important and difficult complication with which the operator has to contend. In short, in pelvic operations the risk and the difficulty will ever lie in the separation of organized inflammatory products. Adhesions, when old, between the pelvic viscera and diseased tubes become degenerate, and hence easily ruptured. In one case only had strong adhesions, deep in the pelvis, stayed his hand. The right tube and ovary adhered strongly to the sac and right side of the uterus, and the whole adherent mass was absolutely inseparable. Again, the rupture of pus-tubes or cysts filled with inflammatory, septic, or malignant elements will be followed by serious symptoms. Operation becomes difficult when the ovaries and tubes, tightly distended with pus and softened through pathological changes, cheesy in consistence, are matted together with the rectum and small intestines.

Dr. CHARLES HERMON THOMAS exhibited a

UTERINE APPLICATOR AND DRESSING-FORCEPS COMBINED.

This instrument, which is specially adapted to making applications within the cavities of the neck and body of the uterus, but which is also available for making dressings and applications to the vagina and external surface of the cervix, has borne the test of two years' use. It is in forceps form: the blades are strong and resistant from the handles forward about two-thirds of their length, when they narrow rapidly, so that when taken together they become about equal in size to the ordinary uterine sound. This narrow portion, somewhat suggestive of the long beak of the angular ear-forceps, is about three and a half inches in length, the tips being roughened on their opposed surfaces. It holds securely the smallest pledget of cotton, and, by reason of the springy character of the beak, will permit the locking of the handles when a full-sized pledget or tampon is placed within its grasp. The point is slightly probed as an extra precaution when introduced to the uterine fundus, though a small cotton ball answers all needful purposes as a protective tip. He had usually employed the plain point, on account of its occupying less space at the internal os uteri. The beak is curved to a shape corresponding very closely to that of Ellinger's dilator, which had been found so generally well adapted to entering the uterus. This portion is electro-plated with gold, when so ordered (a proceeding of moderate cost, and to be commended), as a protective against the corrosive action of iodine, iodized phenol, and the like, which so rapidly destroy nickel-plating and corrode polished steel surfaces. The instrument was made under his directions by J. H. Gemrig & Son, of this city.

Some practical points of use may be mentioned. Soiled or medicated cotton is easily removed with the use of one hand only by simply unlocking the handles and wiping the point in a crumpled paper, thus leaving the other hand free for other employment, and avoiding the trouble, the soiling of the fingers, and the whittling often involved when the wire applicator is used. In its use

there is immunity from the rasp-action of the closely-wrapped cotton of the wire applicator, and also a greatly-increased carrying capacity of the cotton for medicated liquids. Moreover, it will be found convenient and desirable to make use of the instrument as a uterine sound incidentally in certain instances. In his own experience it had proved practicable as an applicator, one fully meeting the needs of most cases, while as a uterine dressing-forceps for general use it had been found so satisfactory as to have superseded all other instruments of this class.

Dr. BAER said the instrument presented by

Dr. Thomas was a very ingenious one, and will doubtless serve a good purpose where the cervical canal is patulous. A greater quantity of the medicating agent used can be carried to the diseased surface than when the tightly-wrapped cotton is used.

Dr. J. F. WILSON had nothing to add to what Dr. Thomas had said. He had used one for several months, and agreed with Dr. Thomas as to the ease of application and removal of soiled cotton.

Dr. PARISH said that the forceps was valuable and would be much used. As an applicator it will be very convenient. A few years ago the sound and applicators were too much used, but extremes either way are wrong. Applications to the endometrium are sometimes needed.

Dr. H. A. KELLY said this was a very valuable instrument.

OVARIAN TUMOR.

Dr. PARISH exhibited a specimen of ovarian tumor removed the previous day. The symptoms had been very peculiar, and the form of the abdomen was misleading, there being a deep groove across the hypogastric portion of the tumor. Numerous adhesions gave great fixity. These adhesions embraced the colon, parietes, and bladder, and were old and dense. Its rapid growth had raised a question of malignancy. A great portion of the tumor was solid.

Dr. HARRIS remarked that a microscopic examination of the tumor should be made. There had been great difficulty in diagnosis as to the origin and character of the tumor. A slight fluctuation could be detected in the lower portion under the use of an anæsthetic. There had been no uterine symptoms, and menstruation had been regular. The long Fallopian tube crossed the tumor and made a deep constriction across its middle.

Dr. BAER did not think rapid growth a proof of malignancy. He had seen five or six cases of very rapid development: one in three months contained a bucketful of fluid. In none of these cases has there been any return or other sign of malignancy. The presence of papillomatous growths within the cyst is no proof of malignancy.

Dr. JOSEPH PRICE exhibited a forceps for the complete closure of the trocar-puncture in ovariotomy.

W. H. H. GITHENS,
Secretary.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held January 6, 1886, the President, Dr. J. M. DA COSTA, in the chair.

Dr. George Waring, Jr., of Newport, Rhode Island, read, by invitation, a paper on

THE DISPOSAL OF SEWAGE, AND THE PROTECTION OF STREAMS USED AS SOURCES OF WATER-SUPPLY.

One of the most important questions now claiming attention, in connection with the sanitary condition of houses and towns, relates to the manner of getting rid of the foul constituents of the liquid effluent in such a way as to prevent annoyance from odors, danger from the development of infection, and the contamination of watercourses and harbors. The difficulties presented have al-

ways existed, and the ill effects of ordinary methods have always been known. It is only since attention has been called to the relation of the foul effluent of house and town drainage to the spread of diseases that the difficulty has been generally recognized, and only since the modern growth of the larger towns that its dangers have been fully apprehended.

In a few fortunate cases, such as those of towns discharging their effluent into great rivers like the Mississippi, the remedy is provided by the volume of the stream to which the sewage is added. In London, the Thames has become so foul that the Royal Commission which recently investigated the matter pronounced the system of outflow there established to be "a disgrace to the metropolis and to civilization." In Paris, the discharge of the great collecting sewers into the Seine has produced a condition that is no longer tolerable. Were the houses and streets of Philadelphia drained in accordance with modern ideas of decency and efficiency, the condition of the Delaware would perhaps become little better than that of the Schuylkill. The great addition to the tidal volume of the harbor of New York, due to the inpouring through the East River of the higher tide of Long Island Sound, mitigates, but does not remedy, the foul condition due to the discharge of the city's wastes along its whole border. In short, all considerable communities in this country and in Europe are confronted to-day by a problem which it is absolutely necessary to solve. In one way or another the waste organic matter of our domestic life and of our industries must be withheld from the waters into which our sewers discharge.

I propose to notice, only in passing, what may be called the more artificial means for accomplishing this result; that is, the chemical and mechanical methods of precipitation, decantation, and distillation. There are instances in Great Britain and on the continent of Europe, where the difficulty of securing a sufficient area of land for what we may regard as the more natural treatment is so great that there is no choice but to resort to these more costly and less efficient processes.

It is possible, by an addition of the salts of iron and other salts, of milk of lime, of comminuted clay, etc., to cause the deposition of nearly or quite all of the suspended impurities of sewage. The deposit or sludge thus formed is sometimes treated by filtration, drying, filter-pressing, etc., in such a manner as to become available as manure for use on lands not too far removed.

In connection with the Liernur system of pneumatic removal in Holland, an ingenious plan has been devised by which the solid parts of the slightly-diluted effluent are recovered by evaporation *in vacuo*. In Germany, other more elaborate processes, including the distillation of the purified effluent, have been measurably successful in the production of the salts of ammonia for commercial use, and of a residuum of some manurial value.

It seems hardly worth while, in the short space here at my disposal, to do more than to refer to these processes, which, however important under favoring circumstances, are not suited to conditions prevailing almost universally in this country. There is probably no town in the United States where any treatment of sewage is desirable, where it will not be cheaper and more simple to overcome the difficulty by the aid of surface or sub-surface irrigation, or by more concentrated filtration,—filtration, in greater or less degree, being an essential element of all irrigation. This application to the soil is not only cheaper and more simple, but is also more effective. No chemical or mechanical treatment has thus far been devised which produces an effluent so entirely free from organic impurity and from the lower forms of life as that which is produced by properly-regulated agricultural disposal.

We have been, until recently, quite in the dark as to the processes by which organic wastes are destroyed after application to the ground. We seem now to have some positive knowledge on the subject,—knowledge due largely to the investigations of Dr. Frankland in England, and of Schloesing and Muntz in Paris, these investigations being an application of knowledge derived from the biological investigations of late years.

It may now be accepted as a demonstrated fact, that the various processes of oxidation and nitrification by which organic impurities in the soil are reduced to their mineral elements or to elementary salts are due to, or are largely aided by, the reproduction and growth of bacterial life. This was especially well demonstrated in the Paris experiments by the fact that while sewage filtered through a suitable soil confined in a cylinder two metres high, the liquid being applied with intervening periods for aëration, was deprived of its impurities and allowed to pass out at the bottom of the column as pure water, the process being accompanied by a great increase of bacterial growth, the impregnation of the soil with the fumes of chloroform was sufficient, by arresting bacterial activity, to allow the sewage to be discharged as impure as it was received. Ample confirmation of the obvious conclusion was found in the fact that after the chloroform had entirely escaped from the pores of the soil the purifying effect was fully restored.

Roughly speaking, or rather practically speaking, the process is this. When sewage is applied to the soil its impurities are filtered out and are attached to, or involved with, the particles of the soil. The water thus purified descends to the lower strata,—to the underdrains or other means of outlet. As the water descends, fresh volumes of air enter and

furnish oxygen which it is the office and the means of life of the *bacterium termo* to combine with the retained impurities. The resultant product is fully-decomposed matter available for the use of plants or for innocuous removal in solution. There is much in the way of detail concerning the processes involved yet to be discovered, and investigation is active in this direction. Enough is now known to constitute the basis of a rational theory applicable to the practical processes we are considering. These processes have long been employed with more or less completeness and with corresponding perfect or imperfect results.

It would be a fair summing up of the whole case to say that we now know, by well-established theory and by ample practice extending over more than twenty years, that we have in soil a universally available agent for the safe, inoffensive, and complete destruction of everything in the way of organic waste that we may deliver to it in a proper manner.

As we look over the field of practice, beginning with the Craigentinney Meadows at Edinburgh, which have been irrigated with sewage for more than a century, and ending with the most complete modern examples, we find the greatest conceivable variety of conditions and a great variety of results. There are more than one hundred sewage farms in England to which are applied the effluent of as many towns, large and small. Some of them have been carefully arranged, and are fed by sewers which deliver the sewage to them in a very early stage of decomposition, and where the great bulk of the storm-water is diverted to other outlets. On these the best results are obtained. In other cases the attempt is made to purify the whole outflow, storm-water and all, with the natural result that floods of storm-water deluge the land at those times when it is already drenched by the heavy downfall and is incapable of absorbing more water. Here the result is far from satisfactory.

In Germany, sewage-irrigation farms connected with the city of Berlin, with Dantzic, and with Breslau, arranged in accordance with modern ideas on the subject, are all instances of notable success.

At Gennevilliers, where about one-fifth of the whole outflow of the sewers of Paris, about one-half of the dry-weather midsummer flow, is distributed over a very large area of thirsty and hitherto almost valueless sand and gravel, the result is excellent.

In our own country we have as yet no instance, save the recent one of Pullman, Illinois, of a general system of sewage irrigation. The result there, according to all reports, is as good as it has been elsewhere.*

(To be continued.)

* Atlantic City, New Jersey, should also be excepted. See article in last issue by Boardman Reed, M.D., on Improved Sewerage and Sewage Utilization at Atlantic City, page 492, *ante.—Ed. P. M. T.*

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held April 1, 1886, the President, A. JACOBI, M.D., in the chair.

The PRESIDENT announced Dr. Van Derveer, of Albany, as memorialist for Dr. Van der Poel, and Dr. Fordyce Barker as memorialist for Dr. Gaspar Griswold.

IS DISEASE OF THE UTERINE APPENDAGES AS FREQUENT AS IT HAS BEEN REPRESENTED?

Dr. H. C. COE, the author, said that chapters on ovaritis and periovaritis were among the most unsatisfactory in text-books. The current literature of the subject was abundant, but much of it was compilation of not a sufficiently critical character, and based upon ingenious but fanciful views of older writers. The ovarian stroma was full of surprises for the microscopist. Within the organ was ceaseless activity, and the minute structure did not constantly show the same appearance either in different ovaries or in different portions of the same ovary. The Graafian follicles themselves were subject to frequent metamorphosis, while their essential structure was a matter of dispute. Nothing was more common than to hear that an ovary had been removed because it was cystic, yet no one had determined the size to which a follicle might attain without being called cystic. If it was so difficult for the microscopist to say where the normal was departed from and pathological changes began, certainly the surgeon should hesitate to pronounce upon the delicate shades separating the healthy from the diseased state by a hasty glance at the organ held up between the fingers at the operating-table.

Dr. Coe then considered the criteria of the laparotomist for judging the ovary to be in a diseased state. These were hypertrophic, atrophic, or cystic change. The ovary was usually described as almond-shape, but it might be spherical, oblong, fusiform, disk-form, and vary considerably in size, and still be normal. It was considerably larger in a congested state, arising from menstruation, the influence of etherization, and other conditions, and such functional or temporary enlargement might be regarded by the surgeon as due to disease calling for extirpation. A diminution in size might be an indication of senile atrophy, and the organ might be scarred and present a variety of appearances due to physiological changes which the superficial observer was liable to mistake as pathological. Localized fibrinous thickening frequently existed in an ovary which preserved its functional activity and in a patient who presented no ovarian symptoms. But among the excuses offered by ovariotomists for removing the ovary cystic degeneration was the one most frequently heard, and the author had time and again seen ovaries containing three or four cysts not larger than a pea presented as cases

of cystic degeneration of the ovaries without the diagnosis being even questioned. Without venturing to dwell upon such a disputed point, he would simply call attention to the fact that, if all such cystic ovaries were to be regarded with suspicion because the precursors of cystoma, few women could be said to be out of danger. True hypertrophy of the ovary was exceedingly rare, as was also hæmatosalpinx; hydrosalpinx and pyosalpinx were also rare, yet many of the specimens removed by laparotomy in New York were said to be of this nature. A large share of them had passed through his hands, and he had found pyosalpinx in not more than one-fifth of the cases. Thus, as the frequency of disease of the uterine appendages had been exaggerated, it was impossible to avoid the conclusion that those organs had been removed oftener than the circumstances justified. He believed that in the future the symptoms of which many of the patients had complained would be explained more frequently by the presence of localized peritonitis or neuralgia. Not a few women who had had their tubes and ovaries removed in New York have precisely the same pains from which they had suffered before the operation, and the one criticism to be offered upon the work of American laparotomists was that they did not follow their cases long enough after reporting them as cured. It was worthy of being borne in mind that if a localized peritonitis had not been the cause of the pain before the operation, it might be developed by the operation and place the patient in a worse condition than she was in before.

Dr. Coe said it had not been his intention to attack laparotomy in general, but he simply wished to show that the presence of insignificant changes in these organs formed an insufficient excuse for subjecting a woman to abdominal section; and he expressed the belief that the present enthusiasm in favor of Tait's operation would not endure, because it would be found that the number of cures was entirely out of proportion to the number of operations. When it could be demonstrated that the tube was distended with pus, of course it should be removed, as there was danger of rupture and peritonitis.

DISCUSSION.

Dr. W. T. Lusk opened the discussion, and said that while he was not an enemy of Tait's operation, because it had been of definite benefit in many instances, he still thought it was performed sometimes when it should not be, and usually for the reason that surgeons were unable to follow Tait's advice, and return the organs to the abdominal cavity when they found after abdominal section that they were not diseased. He had seen at the operating-table tubes lifted out of the abdominal opening and declared to be diseased, when he was unable to see that they offered anything abnormal. When some years ago he was teaching physiology, he often showed ovaries as simply typical examples of normal ovaries which would now often be regarded as cystic. He had an impression that in the future our ingenuity would enable us often to substitute some form of aspiration of the tubes for Tait's operation, and relieve ourselves of the necessity for opening the abdomen at all. He had seen so much disturbance result from removing the ovaries that he thought we ought to hesitate somewhat before exposing a woman to this new source of evil.

Dr. W. Gill Wylie did not know what was to be done, unless each surgeon attached to himself a pathologist who should examine the appendages at the operating-table before they were removed: if this could not be done he would have to depend, as heretofore, upon a clinical diagnosis and the gross appearance of the organs at the time of operation. He was able now, after preparatory treatment and with the patient under ether, to tell almost always the exact condition of the pelvic organs. He rarely operated now, except for pyosalpinx. He did not believe that a localized peritonitis could exist to any extent without disease of the tubes and ovaries.

Dr. W. M. Polk thought that what was now recognized as salpingitis was what we formerly regarded as cellulitis, and we were able to relieve the large majority of cases by confining the patient to bed and applying poultices to the abdomen, etc. But he thought such cases were simply the result of extension of inflammation from the lining membrane of the uterus from a great variety of causes, and if pus got into the folds of the broad ligament it was through the fimbriated extremity of the tube.

Dr. Mundé had found, on looking over his case-books, that out of three thousand cases of diseases of women, one hundred and seventeen were cases of oöphoritis, salpingitis, and peritonitis combined, while two hundred and twelve were cases of oöphoritis not complicated with salpingitis and peritonitis. But, while he had found disease of the uterine appendages frequently, he probably had operated less frequently than many other gynæcologists. These statistics gave an affirmative answer to the question propounded in the paper, but he would not say that removal of the tubes and ovaries should be done as frequently as was done by some of the followers of Tait. He must say that he had not often found dilatation of the tubes with pus and serum. It was not so difficult to say, in a given case, that there was something abnormal and that one suspected salpingitis, but it was more difficult to make a positive diagnosis, and to determine whether or not to operate. With regard to removal of normal ovaries, he did not approve of it, although he had done it twice. One of the patients committed suicide later, while the other made a permanent recovery. In pyosalpinx the tubes should, of

course, be removed. He agreed with Dr. Wylie and Dr. Polk, that the majority of cases of pelvic cellulitis were cases of pyosalpinx which had worked its way out.

Dr. Emil Noeggerath was glad to hear the views expressed by Dr. Polk, as they were those which he had entertained and expressed many years ago. Parametritis and cellulitis he thought could always be traced to a lesion of the mucous membrane of the uterus. Regarding the frequency of the affections under discussion, he had said, many years ago, that endometritis, or endometritis with parametritis, now recognized as salpingitis, was among the most common affections calling for treatment by the gynæcologist. He believed that a number of those cases operated upon could be relieved by other means.

Dr. Coe closed the discussion, and said a diagnosis based upon clinical observation could not be so positive as by an examination of the specimens, and consequently some of the cases in which disease of the appendages had been clinically diagnosticated must be looked upon with doubt. He had the support of other microscopists that but few of the specimens sent for examination showed pyosalpinx or hydrosalpinx.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held March 24, 1886, the President, John A. Wyeth, M.D., in the chair.

Dr. Freeman, of the Committee on Microscopy, reported that the specimen of tumor of the brain presented for a candidate at the last meeting of the Society was a small, round-celled sarcoma.

The following specimens were presented for candidates: By Dr. H. Marion Sims, a dermoid cyst and carcinoma belonging to the same ovary; Dr. G. F. Shrady, lungs from an infant dead of acute general tuberculosis; by Dr. T. M. Prudden, intussusception.

INTESTINAL INCARCERATION.

Dr. Louis Waldstein presented a portion of the gut removed from the body of an Italian, who died, soon after admission to the German Hospital, with symptoms of perforative peritonitis. At the autopsy he found a part of the jejunum, at the right of the umbilicus, cyanosed, and constricted by a diverticulum having its origin at the middle of the ileum, the other end being attached by adhesive inflammation lower down. The portion of jejunum which had got beneath this band had become strangulated, as in two other cases related by him to this Society during the year.

ELONGATION AND FIXATION OF THE VERMIFORM APPENDIX UPWARD, WITH FATAL PERITONITIS.

Dr. Waldstein also presented the intestine of a child which died, aged 9 years, with symptoms of perforative peritonitis. At the autopsy he found an elongation of the vermiform appendix, with fixation upward from adhesive inflammation; within was a fold of mucous membrane, the seat of chronic inflammation followed by acute inflammation with perforation. The case supported an opinion which he had expressed at a recent meeting of the Society, that this abnormal position of the appendix favored inflammation and perforation.

FIBROID TUMOR OF THE MESENTERY.

Dr. Waldstein presented a third specimen, consisting of a fibroma of the mesentery closely connected with the jejunum, removed from the body of a woman who had at first suffered from pain in the abdomen, radiating to the back and thighs; later, from vomiting, emaciation, etc. A tumor was felt in the median line above the symphysis, unconnected with the uterus, and thought possibly to be, by one gentleman, a floating kidney. It was oblong, hard, and smooth. The patient died with all the signs of perforative peritonitis. At the autopsy the small intestine was found much dilated, cyanosed, filled with gas and fluid; in the pelvis was bloody serum. To the right of the umbilicus was a tumor, smooth, hard, oblong, twelve centimetres long, eleven broad, and ten thick, which when moved carried a loop of the jejunum with it, but careful examination showed that it was enclosed between two folds of the mesentery and thus brought in close relation to the jejunum. It was a fibroid, without muscular tissue, with dilated blood-vessels and extravasations of blood. The glands were not enlarged.

ABNORMAL PLACENTA.

Dr. H. J. Boldt presented a placenta, the fœtal surface of which was corrugated, much shorter in its diameters than the maternal surface, containing small cysts, and presenting the appearance of fibrous connective tissue. There was no history of syphilis. He wished to have the specimen examined by the Committee on Microscopy.

ACUTE TUBERCULAR MENINGITIS AND GENERAL TUBERCULOSIS.

Dr. Boldt also presented the lungs of a child which had died with symptoms of tubercular meningitis. Tubercles were also found in the lungs and other organs. The interest in the case related to the very rapid progress to a fatal termination in a patient whose family history was non-tuberculous.

ANEURISM OF THE HEART.

Dr. T. M. Prudden presented the heart of a patient who died on the third day after admission to the hospital, having had aphasia and partial right hemiplegia, and a double murmur, and friction-sound at the apex of the heart. The autopsy simply revealed œdema of the

meninges and brain-substance, and rather marked atheroma of the arteries at the base of the brain, particularly of the left middle cerebral : there were no clots, and no signs of embolism.

The abdominal organs were bound together by old adhesions. There was some fluid in the pleural cavities.

The lesions of interest were in the heart, which was increased in size, and showed a little bulging at the junction of the two ventricles in front. All the cavities were dilated, and the walls of the ventricles were considerably hypertrophied.

There was no very marked valvular lesion. At the lower right front aspect of the left ventricle was a pouch, nine centimetres in length by about four in breadth, at which the wall of the heart was not more than a millimetre in thickness. The coronary arteries at their commencement were markedly narrowed from atheromatous degeneration. The specimen was considered rare.

INFLAMED MOLE—MYXOMA OF THE BREAST—MYOFIBROMA OF THE TENDO ACHILLIS.

The PRESIDENT presented the specimens, which were removed from different patients, the first two leading to some remarks on the importance of early removal of tumors which were liable to become malignant, and of thorough removal of the axillary glands. The tumor of the tendo Achillis had given rise to great pain, which led to the suspicion that it was a neuroma, but microscopical examination showed it to be a myofibroma.

At the executive session resolutions were passed upon the death of Dr. Austin Flint.

NEW BOOKS.

NOUVELLES ARCHIVES D'OBSTÉTRIQUE ET DE GYNÉCOLOGIE. Under the direction of CHARPENTIER, S. DUPLAY, BERNUTZ, GUÉNIOT, PORAK, SEREDEY, POLAILLON, and DOLÉRIS (Editor-in-Chief), with a number of collaborateurs, among whom is LUSK, of New York, a new journal appeared on the 25th of January, edited by FÉLIX ALCAU, and published in Paris. It is a handsomely-printed, single-column, leaded octavo, and, in addition to a number of original articles, it has a supplement containing a Répertoire universel d'Obstétrique et de Gynécologie, which is a valuable summary and abstract in French of articles upon allied subjects in the current medical literature in various languages.

DISORDERS OF MENSTRUATION. A Practical Treatise. By JOHN N. UPSHUR, M.D. New York, G. P. Putnam's Sons, 1886. 12mo, pp. 220.

PRACTICAL CLINICAL LESSONS ON SYPHILIS AND THE GENITO-URINARY DISEASES. By FESSENDEN N. OTIS, M.D. New York, Printed for the Author. 1886. 8vo, pp. 584.

VON ZIEMSSEN'S HAND-BOOK OF GENERAL THERAPEUTICS. Vol. IV. THE TREATMENT OF DISEASE BY CLIMATE. By Dr. HERMANUS WEBER. GENERAL BALNEOTHERAPEUTICS. By Professor OTTO LEICHTENSTERN. New York, William Wood & Co., 1886. Pp. 496.

A REFERENCE HAND-BOOK OF THE MEDICAL SCIENCES. Edited by ALBERT H. BUCK, M.D. Vol. II. New York, William Wood & Co. 4to, half morocco, pp. 814.

NINTH ANNUAL REPORT OF THE BOARD OF HEALTH OF THE STATE OF NEW JERSEY, 1885, AND REPORT OF BUREAU OF VITAL STATISTICS. Trenton, 1885.

NEW REMEDIES AND CLINICAL NOTES.

BOLDO-GLUCINE, OR THE GLYCOCIDE OF BOLDO, AS A NARCOTIC.—In the *Paris Médical*, November 21, 1885, it is observed that much has been written on boldo, but no generally-admitted conclusions have been forthcoming. The tincture of boldo was used, as well as the wine, when subsequently boldine, an alkaloid, was isolated by Verne and Bourguin. In 1884, M. Chapoteaut extracted from this plant another substance, which when submitted to reagents behaved as a glucoside. It was first tested on dogs, and afterwards on patients in M. Magnan's wards: doses of two, four, six, and eight grammes were given in draughts, capsules, or in rectal injections. Boldo is a powerful narcotic, without any attendant disagreeable results. A patient of M. Magnan, at the Sainte-Anne Asylum, who suffered from hallucination and passed sleepless nights in a great state of distress and excitement, produced by imaginary tormentors, slept soundly when she took two grammes of boldo. This was discontinued during a period of ten days, and her old sufferings returned ; she implored to have the capsules given to her again, and she then passed tranquil nights. Dr. Juranville, in a short memoir on boldo, describes ten similar cases. This substance is a hypnotic agent, producing sleep similar to natural sleep ; there is an absence of anæsthesia ; the respiration is normal ; less carbonic acid is exhaled than when awake ; the brain is also less congested than during waking hours. Administered to insane patients, boldo produces sleep in patients who have been long worried by insomnia.—*London Med. Record.*

PERFORATING ULCER OF THE STOMACH OPENING INTO THE LEFT VENTRICLE—DEATH BY HEMORRHAGE.—Dr. Finny reported at the Pathological Section of the Academy of Medicine of Ireland a remarkable case. A farm-laborer, 19 years of age, had acute rheumatism with pericarditis five years before admission into Sir Patrick Dunn's Hospital. He had made frequent complaints of pain in the cardiac region during the interim, but presented no symptoms of disease of the stomach. There was no nausea or vomiting. One morning, after a restless night, he passed blood from the bowels, and shortly afterwards died in syncope. At the autopsy, ulcer of the stomach of unknown duration was found; acute rheumatic pericarditis and adhesions of the left ventricle to the diaphragm, with obliteration of the sac ; and, third, a perforation into the muscle of the heart, due to recent activity of the ulcer. The intestinal tract contained blood, of which two quarts were found in the stomach. It was supposed that the perforation was the result of digestion of the heart-wall by the gastric juice.—*Medical Press and Circular*, March 3.

MISCELLANY.

A Moot Point of Expert Testimony.—The Supreme Court of Utah recently held in a murder case that it was competent to ask a physician who made the post-mortem examination his opinion as to the direction from which the blow was delivered. The court seemed to allow the question, not because the physician was an expert, but because of the special opportunities he had for examination. The admissibility of the evidence rests upon three necessary conditions: "First, that the witness detail to the jury, so far as he is able, the facts and circumstances upon which his opinion is based, in order that the jury may have some basis by which to judge of the value of the opinion; second, that the subject-matter to which the testimony relates cannot be reproduced and described to the jury precisely as it appeared to the witness at the time; and, third, that the facts upon which the witness is called upon to express his opinion are such as men in general are capable of comprehending and understanding. When these conditions have been complied with or fulfilled in a given case, the court must then pass upon the question whether the witness had the opportunity and means of inquiry, and was careful and intelligent in his observation and examination." This decision seems contrary to a similar case in an Eastern State, where the court regarded the physician simply as a medical expert, and said that physicians were not experts in giving and receiving blows, and that they could not be expected to know how a body could be most conveniently placed for receiving a deadly blow.

Mutilation of Children for Street-Begging.—The Seine Assize Court of Paris has recently had before it a horrible case of cruelty to children. Two Spaniards named Vega and Gonzales were accused of mutilating children in order to use them more effectively in street-begging. Some of the witnesses testified that the fiends strapped the little child to a board in agonizing positions in order to make him appear as a cripple. One witness, a woman, testified that watching her chance she was able to examine the boy's arm, which was in a sling, and found on it a horrible wound like a great cancer. The boy told her that his leg was burned in the same way, and that a leprous girl had been treated in a similar way, and was at last abandoned at one of the stopping-places of the party. The youthful victim was examined as a witness, but was in such fear of his torturers that he hardly dared to tell how they operated on him. He said that he had been burned on the instep of one foot, which left it a mass of putrefaction. His leg was also burned, and he had been strapped to a board with rollers and sent into the streets to beg. The defence was, of course, that the villains were innocent, and that the boy preferred going to the streets to beg to being apprenticed out. The jury did not believe, however, that the boy had used vitriol on himself, and convicted the men, who were both sentenced to two years' penal servitude.

Accidents and Accident Insurance Companies.—A Western court has been recently called upon to decide whether the rupture of the tympanum of the ear, occurring when a person was bathing, was an accident or not. The bather had an accident insurance policy, and when the injury occurred brought suit to compel payment. The insurance company claimed that coughing brought on the rupture, or, if not, that it simply "happened," and was not an accident at all such as to make them liable. The bather, on the other hand, said that he was diving, and that the sudden passage through the water caused it to strike the tympanum and rupture it. He believed it to be an accident, and the court did also: so the company got the worst of the suit. It is difficult to see what an accident insurance company exists for except to pay such losses as this.

The Commencement exercises of the Jefferson Medical College were held April 2, when the degree in medicine was conferred upon two hundred and twenty-three graduates. The address was delivered by Professor Theophilus Parvin. A sad accident occurred at the class-reception in the evening. The entertainment was given at Natatorium Hall, and in the midst of the evening part of the temporary flooring yielded and a number fell to the bottom of the basin, some twenty feet. Two members of the class were seriously injured by having the piano fall upon them, and a number of others were bruised, but no fatal accident occurred.

The Medico-Chirurgical College held its Fifth Annual Commencement April 3; the valedictory was delivered by Professor Woodbury. The alumni and class supper was given at the St. George Hotel. There were five graduates in medicine, upon whom Professor Garretson, as President of the Board of Trustees, conferred the degree of M.D.

The annual meeting of the Medical and Chirurgical Faculty of Maryland will be held on April 27, 28, 29, and 30. Colonel George E. Waring, of Newport, will deliver the annual oration, on "The Removal and Destruction of Organic Wastes."

The annual meeting of the American Surgical Association will be held in Washington April 28, 29, and 30, and May 1.

The College of Physicians gave a dinner to the Fellows on the 14th instant at the Hotel Bellevue, when a "loving cup" was presented to the College.

DR. JAMES COLLINS has removed to 704 Franklin Street.

NOTES AND QUERIES.

OBITUARY.

ANDREW NEBINGER, M.D.—Among the prominent practitioners of Philadelphia for the last quarter of a century was Dr. Andrew Nebinger, who owed his success to industry, ability, and energy. A native of the old district of Southwark, at twenty-one years of age he opened, in the southern portion of the city, a drug-store, which subsequently Dr. Nebinger placed in his brother's hands, and graduated in medicine from the University of Pennsylvania in 1850. A practical philanthropist, he gave a large share of his care and attention to the poor. His success attracted such a large practice that he was several times obliged to retire temporarily on account of overwork. He was a manager of the St. Joseph's Orphan Asylum and one of the physicians to the St. Mary's Hospital, and a member of the consulting staff of the Philadelphia Hospital.

Dr. Nebinger retired from active practice some fifteen years ago, and devoted himself to his duties as a member of the Board of Education, and to the management of charitable institutions, in which he always exhibited the greatest interest. He was a member of the College of Physicians, and of the American Medical Association, State and County Medical Societies; in the last two he filled the highest offices. Almost his last appearance in medical circles was on the occasion of his delivery of the Annual Address of the President of the State Medical Society at its meeting at Altoona, and the last time he was out of the house was a few weeks since, when he paid a visit to the St. Mary's Hospital. He was never married. Greatly loved and respected by a large circle of friends and patients, he died at his home, April 12, 1886, in the sixty-seventh year of his age.

PROPRIETARY MEDICINES NOT PROTECTED BY PATENT-LAWS.

DR. F. E. STEWART, in an interesting communication, the length of which would encroach too much upon our space to permit its publication entire, directs attention to some facts that are usually overlooked and liable to be forgotten in regard to so-called patent medicines.

1. Patents are issued in order to advance knowledge and stimulate invention, by giving to inventors exclusive rights to produce patented articles for a term of years, in consideration of the process or discovery being made the property of the public at the end of that period, the manufacture subsequently to be open to free competition. The patent laws were not devised to lock up knowledge, but to make inventions common property.

2. The so-called patent medicines do not come under the provisions of the patent-laws, inasmuch as there is no provision for divulging the secret of their composition at any time, nor is it contemplated that their manufacture shall be a public right after a definite period.

3. Proprietary medicines are protected in the same way that trade-marks are protected, and to the same extent, and no more.

4. The common or scientific names of drugs cannot be registered as a trade-mark; and if they are so registered, the right to the exclusive use of the name cannot be successfully maintained in law.

5. When the name is proper and is the peculiar title of the proprietary preparation, the laws do not prohibit the freest use of the remedy under other names, or prevent the use of the same formula or the manufacture of the same preparation by other parties, provided that the public is in no way deceived as to the source from which the preparation emanates.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MARCH 28, 1886, *TO APRIL* 10, 1886.

MAJOR ALBERT HARTSUFF, SURGEON.—Granted leave of absence for fifteen days. S. O. 71, Department of the East, April 7, 1886.

MAJOR HENRY MCELDERRY, SURGEON.—Relieved from further duty in connection with New Orleans Exposition, and ordered, on the expiration of his present leave of absence, for duty in Department of the East. S. O. 71, A. G. O., March 26, 1886.

MAJOR HENRY MCELDERRY, SURGEON.—Ordered for duty as post-surgeon, Fort Wayne, Michigan. S. O. 69, Department of the East, April 2, 1886.

ASSISTANT-SURGEON LEONARD Y. LORING.—Granted leave of absence for one month, provided that during his absence he furnishes the necessary medical attendance at San Diego Barracks, California. S. O. 19, Department of California, March 24, 1886.

ASSISTANT-SURGEON JOHN VAN R. HOFF.—Granted one month's leave of absence. S. O. 29, Department of Missouri, March 29, 1886.

CAPTAIN JAMES C. MERRILL, ASSISTANT-SURGEON.—Granted leave of absence for three months. S. O. 81, A. G. O., April 7, 1886.

CAPTAIN VICTOR BIART, ASSISTANT-SURGEON.—Sick-leave of absence still further extended one year on account of sickness. S. O. 79, A. G. O., April 5, 1886.

ASSISTANT-SURGEON J. M. BANISTER.—Granted leave of absence for one month, to commence on or about April 2, 1886. S. O. 63, Department of the East, March 26, 1886.

ASSISTANT-SURGEON AARON H. APPEL.—Granted leave of absence for one month. S. O. 66, Department of the East, March 30, 1886.

CAPTAIN H. P. BIRMINGHAM, ASSISTANT-SURGEON (Camp Grant, New York City).—Temporarily assigned to duty at Fort Columbus, New York Harbor. S. O. 72, Department of the East, April 8, 1886.

CAPTAIN JOHN V. LAUDERDALE, ASSISTANT-SURGEON.—From Department of Dakota to Department of Texas.

CAPTAIN GEORGE W. ADAIR, ASSISTANT-SURGEON.—From Department of Dakota to Department of the East.

CAPTAIN JAMES A. FINLEY, ASSISTANT-SURGEON.—From Department of Texas to Department of Dakota.

CAPTAIN H. S. KILBOURNE, ASSISTANT-SURGEON.—From Department of Dakota to Department of the Columbia.

CAPTAIN E. F. GARDNER, ASSISTANT-SURGEON.—From Department of the Columbia to Department of the East.

CAPTAIN WILLIAM W. GRAY, ASSISTANT-SURGEON.—From Department of the East to Department of Dakota.

CAPTAIN J. M. BANISTER, ASSISTANT-SURGEON.—Upon expiration of his present leave of absence, to Department of the Columbia.

FIRST-LIEUTENANT E. C. CARTER, ASSISTANT-SURGEON.—From Department of Arizona to Columbus Barracks, Ohio.

FIRST-LIEUTENANT R. W. JOHNSON, ASSISTANT-SURGEON.—From Department of Dakota to Department of the East.

FIRST-LIEUTENANT GEORGE F. WILSON, ASSISTANT-SURGEON.—From Department of the Columbia to Department of Dakota.
S. O. 79, A. G. O., April 5, 1886.

ASSISTANT-SURGEON RICHARD W. JOHNSON.—Relieved from duty at Fort Buford, Dakota Territory, and ordered for temporary duty at Fort Snelling, Minnesota. S. O. 28, Department of Dakota, March 29, 1886.

ASSISTANT-SURGEON R. L. ROBERTSON.—On expiration of his present leave of absence, will be relieved from duty in Department of Texas, and will report in person to commanding general, Department of Dakota, for assignment to duty. S. O. 78, Department of Dakota, April 3, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM MARCH 28, 1886, *TO APRIL* 10, 1886.

ASSISTANT-SURGEON L. W. ATLEE.—Ordered to duty on U. S. Receiving-Ship "Vermont."

PASSED ASSISTANT-SURGEON N. H. DRAKE.—Detached from duty at Naval Hospital, Philadelphia, Pennsylvania, and ordered to duty at Naval Hospital, Brooklyn, New York.

PASSED ASSISTANT-SURGEON H. B. FITTS.—Detached from duty at Naval Hospital, Brooklyn, New York, and ordered to duty at Naval Hospital, Philadelphia, Pennsylvania.

PASSED ASSISTANT-SURGEON FRANK ANDERSON.—Detached from Naval Laboratory, New York, and granted six months' leave, from May 1, 1886, with the privilege of going abroad.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MAY 1, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE
ON SURGICAL DISEASES OF THE ABDOMEN.

Delivered at the College of Physicians and Surgeons, Chicago, Illinois,

BY N. SENN, M.D.,
Milwaukee, Wisconsin,
Professor of Principles and Practice of Surgery and Clinical Surgery.
Reported by WILLIAM WHITFORD.

GENTLEMEN,—Having completed the subject of injuries and lesions of the brain and pleural cavity, we have reached this evening the important subject of "Abdominal Surgery." It is well to make the statement that abdominal surgery as it is to-day is a creation of recent years; hence you will excuse me if I shall refer to the surgical treatment of diseases of the contents of the abdominal cavity that have been heretofore, and by some are even to-day, considered as belonging to internal medicine. The modern method of wound-treatment has created a new era in the treatment of affections of the abdominal organs. It has created new operations; it has distinctly enlarged the field of surgery. The principal reason for this advancement we necessarily attribute to the discovery of the comparative immunity with which the abdominal cavity can be opened, both for exploratory and for radical measures. Like all other serous sacs or linings, in the language of Schroeder, "the peritoneum can be cut, torn, and opened without any serious results,"—in fact, without the disease extending beyond the reparative process. We are acquainted with the readiness with which the peritoneal surface contracts adhesions, provided the reproductive or productive process is not complicated by wound-infection. It is the early creation of adhesions of the intestinal organs which we shall consider more particularly in treating of lesions and injuries of the abdominal organs. For the treatment of so-called internal lesions, we will consider (1) the propriety and justifiability of opening the abdomen in cases of diffuse peritonitis, instead of, as heretofore, *relying upon opium-treatment, rest, and absolute diet.* With the view of securing rest of the inflamed serous membrane, and thus obtaining the essential primary conditions for union between the inflamed organ and the serous membrane, we to-day, under certain conditions, interfere by surgical procedures. It is in cases where the process tends by its diffuseness towards producing a shock of the system from the peripheral irritation of sentient nerves, or where the process of inflammation extends to subjacent abdominal organs and thus threatens life, that we interfere by a surgical operation to relieve depressing symptoms, and, if possible, to remove the primary cause.

The first condition we shall consider is an excessive tympanites. A meteorismus may be of a twofold character, according to the primary cause which produces the peritonitis.

In case of perforation-peritonitis, where we have a direct communication between the peritoneal cavity and the intestinal tube (an escape of gas into the peritoneal cavity), we have a meteorismus. In pointing to indications for the relief of distention by surgical interference, it is well to call your attention to the fact that in case of the presence of gas in the free abdominal cavity we have at once displacement of the free abdominal organs,—a dislocation, as it were, indicated *intra vitam* by a movement of the liver in an upward direction. This is considered an important diagnostic feature of meteorismus depending upon dilatation of the intestinal tube and the presence of gas in the peritoneal cavity. An early displacement of the liver will be indicated by an absence of dulness over its normal area,—a tympanitic resonance over that portion of the organ which covers the abdominal cavity. In perforation-peritonitis the mechanical removal of the meteorismus may be accomplished by simply perforating the abdominal wall or puncturing the peritoneal cavity. In dilatation of the intestinal tube, the true meteorismus in cases of diffuse peritonitis, a procedure which we term "enterocentesis" is accomplished by the introduction of a small hollow needle thoroughly disinfected. This is said to be harmless, as no one claims that puncture has been followed by the formation of a fæcal fistula. But, if you remember the œdematous condition and the absence of muscular contraction, you can readily conceive that after puncture by a small instrument of

less than two millimetres in diameter, on account of the absence of muscular contraction the opening may remain patent, and consequently allow of an escape of the intestinal contents, which may give rise not only to local infection, but to a meteorismus in the peritoneal cavity. If you have occasion to puncture the intestine, the puncture should be made obliquely, so that the canal may close in a valvular manner: consequently, the precautions to be exercised are (1) to select a small needle, made thoroughly aseptic, and (2) to puncture the intestine in an oblique direction. You must not expect that by resorting to enterocentesis the entire meteorismus will disappear, unless it is tympanites due to the presence of gas in the peritoneal cavity. The distended bowel at the point of puncture will collapse by the escape of intestinal gas, but, on account of the absence of contractility in the intestinal track, a great deal of gaseous accumulation will remain: consequently, we are ready to admit the correctness of the conclusions formulated by the Academy of Medicine of Paris, which, after a long and tedious discussion of this question, said of the operation of laparotomy, that it is comparatively free of danger, that it will remove distressing symptoms, and that it is a justifiable surgical procedure in well-defined cases.

By a perforation-peritonitis we understand that which is produced by a perforation of the abscess; by a perforation, again, of any portion of the gastro-intestinal canal and an escape of its contents into the peritoneal cavity. It has been shown by experiment that escape of the pathological products or of the contents of the intestinal canal of the stomach will take place on the right side of the peritoneal cavity, and that, primarily, the product of effusion will occupy the same side, —gravitating, as it were. It is determined by the attachment of the mesentery, which, you will recollect, is attached in an oblique direction from left to right: consequently, the products of effusion will gravitate towards the right of the inguinal region. On the left side there is no obstruction until the fluid or product of perforation reaches the pelvic cavity. While products devoid of septic germs may become localized in this particular region, not being able to effect entrance into the left side on account of the presence of the mesentery and the convolutions of the intestines, giving rise to a protective peritonitis in the region where perforation has occurred, yet by means of the peristaltic action of the intestines the product containing septic germs in a remarkably short time becomes diffused throughout the peritoneal cavity, and thus excites primarily diffuse septic peritonitis.

In case perforation has taken place, we have in the first place the clinical evidences of shock from the primary effect of the product of effusion upon the serous membrane; in the second place, evidenced clinically by the presence of gas in the peritoneal cavity; and, in the third place, by all the clinical features indicative of septic peritonitis.

Conservative treatment in cases of this kind, by the administration of opium, rest, absolute diet, etc., means simply death. Surgeons have expanded the field of usefulness, and in cases of perforation-peritonitis invariably advise laparotomy as a curative measure. A laparotomy under antiseptic precautions is (1) devoid of any immediate or remote danger; (2) it relieves promptly the meteorismus; and (3) it tends to remove the primary cause of the peritonitis by removing all of the products of effusion from the abdominal cavity and the primary source of infection.

If, for instance, a perforation-peritonitis should follow a perforating ulcer of the stomach, laparotomy would first have for its object the removal of the products which have escaped from the perforation. Carry a clean sponge moistened with antiseptic fluid into every nook and corner of the peritoneal cavity; search diligently for the point of perforation, excise the ulcer, and close the stomach definitely with two rows of sutures. If perforation take place through the lodgment of a foreign body,—circumscribed, suddenly becoming diffuse,—a laparotomy has for its object the removal of the products of effusion. You should search unceasingly for the point of perforation, in order to remove the foreign body and close the intestinal tube. So it may be laid down as a maxim that in all cases of circumscribed or diffuse peritonitis due to the entrance of a foreign substance into the peritoneal cavity, laparotomy is indicated. In other words, a surgeon does not do his duty by inaugurating what is called a conservative course of treatment.

I can readily understand that when the

young practitioner meets with his first case he is liable to hesitate and shrink from the responsibility; but in cases of this kind, desperate as they may appear in character, with a tendency to destroy life almost without exception, we are justified in resorting to desperate means. In the first place, make an absolute and positive diagnosis by carefully considering the history of the case, ascertaining the primary cause by finding out how the perforation has taken place. In case there are no indications for deviating from the ordinary rule, you should make the usual incision through the linea alba: for instance, if the abscess is primarily in the abdominal parietes or between some of the more superficial organs and the peritoneal cavity, cut down directly upon the abscess, thoroughly disinfect it, and from there gain entrance into the peritoneal cavity, and, if favorable indications present themselves, perform laparotomy in the usual manner.

Suppurative peritonitis is another indication for the performance of this operation. To-day, with the immunity offered by antiseptic surgery, it is indicated in almost every case. It is indicated because the presence of pus in the free peritoneal cavity will destroy life by the constant entrance of ptomaines into the circulation; in other words, by a continued fever produced by the absorption of the products of putrefaction in the peritoneal cavity. Girard has collected sixteen cases of laparotomy. Albert enlarged the statistics and mentions twenty cases, and we are informed that the operation was followed by death in only one instance.

Another question which will present itself to you is how to differentiate an ordinary chronic from a suppurative peritonitis. In the first place, the history of the case must guide you. If you have a history of perforation or of septic infection as a result of the primary cause of the peritonitis, the probability is that the product of exudation is pus and not serum. Again, if the case assume a chronic form, attended by gradual distention from the accumulation of pus in the cavity,—in other words, if the physical symptoms indicate the presence of a fluid which does not yield to absorption, with a continual rise of temperature, profuse sweating, and more particularly an œdematous condition of the abdominal parietes,—you have incations of the presence of suppurative peritonitis; but a positive diagnosis is possible only by resorting to exploratory puncture, which should always be practised if any doubt remain as to the character of the pathological accumulation. A diagnosis once made, the operation is easy: opening the abdominal cavity through the linea alba just above the bladder, making only an incision sufficiently large to introduce a small drainage-tube, placing the patient in a proper position to evacuate the contents of the accumulation, and dressing antiseptically. Granulation occurs, and the cavity of the pyogenic membrane and the abscess becomes obliterated by the formation of cicatricial tissue between the intestinal organs and the parietal peritoneum.

Another and well-recognized form of peritonitis, only recently made a special subject of study, is the tubercular, due to the presence of tubercles either in any of the serous membranes covering the abdominal viscera, the pelvic organs, or the omentum. Statistics tend to show that in cases of this kind the ascites from the miliary tubercles is promptly relieved by laparotomy, and local circulation facilitated, as well as the future absorption of the products of effusion. In contradistinction to suppurative peritonitis, in the tubercular form it becomes your duty to make an incision sufficiently large to enable you to inspect the condition of the tubercular organs; in other words, to afford free access to the tubercular foci and to treat the tubercular lesions locally. It seems that the local application of iodoform dusted over the tubercular surface has a temporary beneficial effect in arresting, for the time being, a further development of the tubercular nodules, in limiting and favoring subsequent absorption of the products of effusion. A tubercular peritonitis you will recognize by a slowness of the process, by an absence of the distinctive features indicative of diffuse septic peritonitis; by presence of pain, first circumscribed, extending gradually as infection proceeds, but always attended by more or less ascites. You will understand that in the abdomen, as in any other part of the body, tuberculosis of any of the contents may exist independently of general tuberculosis. In case it is limited to organs amenable to extirpation, we may often obtain a radical result by removing them.

In considering abscesses of the abdomen, let us first consider the extra-peritoneal: by this I mean abscesses outside of the peritoneal cavity. The first variety is the perinephritic, or abscess which originates around the kidney, either by an intrinsic cause in the kidney itself, producing a perforation of the organ, as the presence of calculi in the kidney, producing a suppurative pyelitis, which by extension and distention gradually perforates and infiltrates the perinephritic tissue. It is that form of perinephritic abscess due to urinary infiltration. The second form is the traumatic, produced by either the direct or the indirect application of force over the renal region, as a fall from a great height produces laceration even into the adipose tissue surrounding the kidney. Another form, more serious than the ones I have described, is the so-called metastatic abscess due to infection.

A perinephritic abscess is always initiated by a high fever, which is proportionate to the area involved in the inflammatory process. It is also attended early by intense pain in the region of the kidney, — pain radiating from that region along the nerves the same as in cases of renal calculus, radiating even to the lower extremity on the corresponding side. As the product of effusion becomes copious, an effect is exercised upon the physiological functions of the organ by compression; and when the product becomes sufficiently abundant to give rise to distention of the space between the peritoneum and the lumbar muscles, the swelling becomes apparent between the lowest rib and the crest of the ilium by a preternatural bulging in a posterior direction, attended by a distention of the cavity by the overlying colon in a forward direction; consequently, attended by a change in percussing the colon in that region.

A positive diagnosis is impossible without exploratory puncture.

If you have a case of localized pain in that region, followed by a bulging of the membrane in a posterior direction, and more particularly if you have symptoms pointing towards a disturbed physiological function of the urinary organs, you have evidences of a perinephritic abscess. You demonstrate its existence by exploratory puncture. The diagnosis once made, a conservative course would be simply loss of time. The presence of pus may give rise to secondary pathological conditions in neighboring organs; the abscess, instead of deviating in a posterior direction, may bulge through the peritoneal cavity, and may even produce perforation-peritonitis by the entrance of pus into the cavity: consequently, indications for surgical interference are positive and well defined.

A perinephritic abscess should always be opened (unless indications to the contrary exist from a posterior aspect) by making an incision parallel with the spine, about two or three inches from the spinous process, commencing immediately below the border of the lowest rib, carrying the incision downward two or three inches, as the case may require, carefully dividing the tissues layer by layer,—by this I mean a careful dissection, not to blindly plunge the knife into the abscess, —on account of the importance of adjacent organs, carefully dividing the tissues down in this direction until the abscess is reached: you will then make a positive anatomical diagnosis by introducing the finger, which, when you have a perinephritic abscess, always detects the kidney in the bottom of the wound. Carefully disinfect the cavity, introduce a large drainage-tube, and keep the wound strictly in an aseptic condition.

The next form is the so-called perityphlitic abscess, the result of perityphlitis. The terms "perityphlitis" and "paratyphlitis" are usually confounded; even text-books fail to make the correct distinction between the two, which is important in order to recognize the seat of the lesion and to adopt proper measures for its relief. A paratyphlitis, as the term implies, means an inflammation of the connective tissue behind the cæcum, where it is not covered by peritoneum. It therefore means a cellulitis posteriorly of the cæcum, inflammation limited to the cellular tissue behind the cæcum, extending in an upward and downward direction. Consequently, a paratyphlitic abscess, if once well developed or well defined, will resemble to a certain extent a perinephritic abscess, because the pus produced behind the cæcum may ascend as far as the kidney without interfering with the adjacent organs. A paratyphlitic abscess, then, is the result of an inflammation originating in the cæcum itself, extending by continuity in the cellular tissue behind the cæcum, or originating primarily in the cæcal connective tissue.

It is almost invariably followed by suppuration in contradistinction to a perityphlitis. A paratyphlitis, primarily, is recognized by pain, and a swelling behind the cæcum which has a tendency to extend in an upward direction. If the swelling be situated behind the cæcum, it is invariably immovable and displaces the cæcum, by pressure from behind in a forward direction.

A perityphlitis, on the other hand, means a circumscribed peritonitis commencing in and limited to the cæcum. It is a pathological condition usually due either to the presence of a foreign body in the cæcum or in the appendix vermiformis, which by continued irritation produces a catarrhal inflammation of the lining membrane of the cæcum, and which by extending in a peripheral direction gradually interferes with the entire diameter of the intestinal wall, and finally expends itself upon the serous membrane. In cases of perityphlitis we find, clinically, evidences of a tumor situated in the right groin of the inner side of the anterior superior spinous process, extending from that region in a downward direction to or near Poupart's ligament, keeping the normal region occupied by the cæcum. The tumor is movable from the absence of adhesions, in contradistinction to a paratyphlitis. This is so important to remember in making the differential diagnosis that Romberger in one instance recognized the location of the disease by simply applying his hand. He was asked to explain the means by which he had diagnosticated a paratyphlitis in contradistinction to a perityphlitis which had been supposed to have existed by other surgeons. He said that in a case of paratyphlitis the sensation imparted is one of firmness, due to infiltration of the para-cæcal connective tissue; in perityphlitis we meet with a well-defined tumor, which, when pressed antero-posteriorly from before backward, imparts a sensation as though it were compressed against a soft cushion. Consequently it is recognized as a fact, clinically, that a perityphlitis is usually due to the presence of a foreign body, recognized early by a well-defined tumor in the cæcum, movable in all directions from the absence of cæcal infiltration. A paratyphlitis, on the other hand, is a tumor which at first is not appreciable; it only increases in a posterior and upward direction as the process of infiltration proceeds.

A practical differential diagnosis is important, because a paratyphlitis almost without exception is followed by suppuration. Perityphlitis, on the other hand, is a circumscribed peritonitis, and is not so frequently followed by suppuration, but may terminate in resolution. From a surgical stand-point the distinction is important, because in paratyphlitis the presence of pus is recognized by palpation of the region between the crest of the ilium and the lowest rib, and by a preternatural bulging of the lumbar space. A paratyphlitic abscess calls for an incision made through the lumbar region in a similar manner as a perinephritic abscess. Perityphlitis, on the contrary, is to be treated on the general principles of peritonitis until symptoms arise to indicate the presence of pus in the inguinal region. When we have symptoms indicating the presence of pus, we should make an exploratory puncture to ascertain the nature of the effusion,—an exploratory puncture made about the appendix vermiformis, as in this particular region the formation of the abscess usually takes place. If perforation take place slowly, an escape of the contents of the appendix, or of the cæcum itself, occurs, and the presence of the irritating material in the para-cæcal region gives rise to a circumscribed peritonitis affecting not only the cæcal structure, but also adjacent organs.

It was Willard Parker that first pointed out the necessity of early operative interference in cases of perityphlitic abscess, with the view of preventing perforation by allowing the products of suppuration to escape early, limiting intraperitoneal tension, and subsequently disinfecting the abscess-cavity,—thus enabling its walls to collapse.

Remember, then, that "para," if applied to inflammation, means inflammation of the connective tissue around an organ; that "peri," on the other hand, means an inflammation of the serous membrane covering an organ. You will hear of a parametritis and a perimetritis, which will serve again to impress upon you the importance of the difference between a paratyphlitic and a perityphlitic abscess.

Resorcin for Erysipelas.—The local application of a two- or three-per-cent. solution of resorcin is highly recommended in facial erysipelas.

ORIGINAL COMMUNICATIONS.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,
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IRITIS AND IRIDO-CHOROIDITIS IN DIABETES MELLITUS.

PROFESSOR LEBER publishes the following results of some investigations as to the occurrence of inflammation of the uveal tract in diabetes mellitus. The form of iritis in diabetes mellitus is peculiar.

1. In nine cases of iritis observed in thirty-nine cases of diabetes, two were in the suppurative form. In one of these the iris became inflamed on one side with the formation of hypopion, and after an interval of eight months the iris of the other eye became involved in the same way. The iritis was not intense; the hypopion was small; the treatment of speedy avail.

2. In another set of cases the whole pupil was filled with a fibrinous membrane, which, however, rapidly disappeared under proper treatment. Twice it was combined with hypopion. This form of iritis is to be classed with the similar condition noted in connection with rheumatism: sometimes it is seen also in connection with gonorrhœal rheumatism. When the iris-inflammation was of lighter grade, the hypopion and pupillary membrane were absent, and the disease took the form of a simple adhesive iritis, with synechiæ and clouding of the aqueous humor.

3. The rapid yielding of the disease to treatment deserves a special note. Leber ascribes this to the use of salicylate of soda, which, since its introduction in the treatment of acute rheumatism of the joints, he has prescribed with great success in iritis and parenchymatous keratitis. Leber draws attention to the similarity in the affections which occur in albuminuria and glycosuria: in both, retinitis hæmorrhagica and degenerative iritis and irido-cyclitis, exudative and hemorrhagic vitreous opacities, cataract, and disease of the optic nerve, occur.—*Graefe's Archives*, 1885.

KERATITIS IN DIABETES MELLITUS.

Keratitis is a rare form of eye-affection in diabetes mellitus. The following list, collected by Dr. Weisenger, of recorded cases will be of value to those interested in the literature of the subject.

1. Leudet's case (*Gazette Médicale*, 1857) of a woman, æt. 32; left-sided keratitis; paralysis of left third and fifth nerves. Autopsy showed syphilitic disease of the meninges at the base of the brain. The case is said to have had the characteristic symptoms of diabetes. This is a doubtful illustration of diabetic keratitis.

2. According to Leber, Von Graefe, in his clinical lectures, called attention to the occurrence of suppurative keratitis in diabetes.

3. Panas (1876) speaks of having observed a case.

4. Galezowski has reported three cases. (*a*) Man, æt. 58, for two years has had hemianopsia: the inner half of right retina and outer half of left being defective; the cornea is opaque, anæsthetic, and has been inflamed for eight days. The urine showed a considerable quantity of sugar. The diagnosis made was keratitis glycosurica. (*b*) A woman, æt. 64, diabetic, with progressive corneal ulcer. (*c*) Diabetic patient, æt. 64, who in the course of eight months was attacked twice with severe hypopion keratitis.

5. Bellouard has reported a case of a man, æt. 33, diabetic, who after violent headache lost consciousness; at the same time both eyes became injected and severe hypopion keratitis developed.

6. Coundouris reports a case of parenchymatous keratitis in a diabetic case, which yielded quickly to iodide of potassium. He refers to a case of Depres, in which a woman with diabetes was attacked with suppurative keratitis of both eyes.—*Graefe's Archives*, 1885.

SUPPURATIVE MENINGITIS AFTER ENUCLEATION OF THE EYEBALL.

Von Graefe, in 1863, reported the history of two cases of death after enucleation of the eyeball, in which suppurative panophthalmitis existed. Since then this clinical fact has been observed a number of times. Professor Deutschmann has prepared an article on this subject based upon an address delivered by Dr. Brückner before the Medical Society of Darmstadt. The paper contains a résumé of twenty-six cases, most of which are drawn from the literature of the subject. From these the following conclusions are drawn:

1. There can be no reasonable doubt that acute meningitis existed in the cases: ten times it was proved by autopsy. Of the

remaining ones, so far as can be judged from the clinical histories, there can be no reasonable doubt.

2. The meningitis is to be looked upon as resulting from the operation.

3. The meningitis was the result of infection with micro-organisms. The incubation-period was of about the same duration in all the cases. The disease was rapid in its inception and progress; very fatal in tendency. The autopsy showed pronounced suppurative meningitis, and, finally, in the few cases examined, micro-organisms (*spaltpilze*) were found in the sheath of the optic nerve, in the optic chiasm, and along the course of the abducens nerve.

With regard to the route by which the infection can take place, the writer thinks that it may be: 1, through the periosteum and bones into the cranial cavity; 2, through the supra-orbital fissure; 3, by way of the sheaths of the third, fourth, and sixth nerves; 4, by way of the orbital veins and sinus cavernosus (this has been demonstrated in a case of Leber's); 5, the lymph-spaces about the optic nerve stand in direct connection with the intracranial lymph-spaces, and it seems very likely that infection can take place in this way.—*Graefe's Archives*, 1885.

TUBERCLE-BACILLUS IN CONJUNCTIVAL TUBERCULOSIS.

Ulrich reports the following case. The patient on whom this observation was made was 32 years old, and had suffered for three years with a conjunctival inflammation of the right eye. At the time of the observation there was thickening of the lids; the lower half of conjunctiva tarsi inferioris, with the lower fornix and part of the adjoining conjunctivæ bulbi, were occupied by an ulcer with ragged, undermined edges; the base of the ulcer was covered with numerous exuberant granulations; several additional but similar ulcers existed in other portions of the conjunctiva. There was family history of tuberculosis, but the patient's lungs were in normal condition, and he was apparently in good general health. About the time of the above observation a child, æt. 10 months, was brought to the clinic with a conjunctival ulcer similar in appearance to the above; there was also family history of phthisis. In both of these cases portions of the conjunctiva were examined with the microscope, with the result of establishing the diagnosis of tuberculous ulcer. The conjunctiva was found to be transformed into strongly-vascularized tissue, infiltrated partly with circumscribed tubercle-nodules, partly with diffuse tuberculous masses formed by the confluence of nodules. With the aid of Ehrlich's staining process, the tubercle-bacilli were discovered.—*Centralblatt für Augenheilkunde*, December, 1885.

[Conjunctival tuberculosis is a very rare affection. There are several cases on record, but the reports of them seem so faulty that it is difficult, in most instances, to know whether they were cases of true tubercle or not. Baumgarten (*Graefe's Archives*, vol. xxiv.) has published a résumé of the cases, with a critique of them, and added the report of two cases of his own. Ulrich's cases, which were studied under the direction of Baumgarten, are, I believe, the first in which the tubercle-bacillus has been found.—H.]

EMPYEMA OF THE FRONTAL SINUS.

Dr. Borthen, of Drontheim, Norway, reports three cases of this disease, which is of interest to ophthalmologists by reason of the proximity of the frontal sinus to the orbit:

Case I.—Woman, æt. 56. The disease began with constant headache, at times extremely violent, and then accompanied with vomiting. The patient also suffered with violent fits of sneezing. A swelling gradually formed at the inner angle of the right eye, dislocating it downward, outward, and a little forward. This swelling commenced in the middle line of the frontal region, extended towards the root of the nose and back into the orbit as far as the finger could reach. It fluctuated under pressure, was covered with normal skin, and was somewhat tender to touch. Exploratory puncture showed that it was full of purulent matter. This was evacuated, after which the eyeball speedily returned to its normal position.

Case II.—In this case there was no dislocation of the eye. The tumor had developed itself with constant violent headache, which had been preceded by violent attacks of sneezing.

Case III.—In this case the prominent part of the tumor was in the orbit, and accompanied by dislocation of the eye. An incision was made into the parts covering the swelling, which was then punctured and several spoonfuls of tough, yellow matter evacuated. A drainage-tube was introduced, and antiseptic treatment adopted.

Borthen calls attention to an interesting

observation in these cases. When the cavity has been emptied and a drainage-tube introduced, and water is injected so that the tube is filled, the water in it is seen to pulsate. Leber has noticed the same thing, and has explained it by the observation of Broca of the pulsation of the marrow of bones, and the experiments of Boeckel, according to which such a pulsation occurs when a narrow opening is made into a cavity surrounded by stiff walls and containing vascular tissue.—*Graefe's Archives*, 1885.

[Empyema of the frontal sinus is a disease which belongs, of course, rather to nasal than ophthalmic surgery. An interesting point, however, for the ophthalmic surgeon to remember is the headache, which is a constant symptom in this disease. The connection between headache and eye-strain has been long recognized, and it is worth while to remember, in investigating the condition of the eyes in cases of headache, the possible existence of sinus-disease as a cause for the trouble. —H.]

HEMERALOPIA AFTER UTERINE HEMORRHAGE.

Dr. Ancke reports the following case. A woman, æt. 38, in the ninth month of pregnancy, was seized with violent hemorrhage from the genitalia. The hemorrhage recurred three times, and was preceded by a swoon; when consciousness returned, vomiting occurred. Examination showed that the fœtus was alive and there were no signs of placenta prævia. Eleven days after the first hemorrhage the patient observed that her sight became so imperfect as night drew on that she could not find her way around alone. The following evening she was completely blind. The next morning the eyes were thoroughly examined, with this result: normal vision and fundus in each eye; the visual fields, under a bright light, were of normal extent, but with diminished light strongly contracted in each eye. In taking the fields, violent supra-orbital pain occurred. Eight days later the patient presented herself again: since the last examination the night-blindness had recurred several times, and once after another hemorrhage. The night-blindness in this instance was associated with prodromal symptoms during the day, in the shape of misty vision. The patient after this disappeared from observation.—*Centralblatt für Augenheilk.*, February, 1886.

NEW INSTRUMENTS.

Ophthalmoscope with Electric Light.—Juler has devised an instrument of this kind. It has 9+ and 15— glasses for refraction purposes. The light is set in action by a small Léchanché battery. The price is such as to bring it within the reach of any student. The makers are Pickard and Curry, 195 Great Portland Street, W., London.

Dr. Thomas Reid (Ophthalmological Society of the United Kingdom, January 28, 1886) has devised an ophthalmoscope for use with the electric light, with an attachment intended for the examination of the superficial layers of the retina.

Optometer.—Fitzgerald has devised an optometer for the rapid determination of refraction. It consists essentially of a set of spherical and cylindrical lenses which move on a curved frame. The cylinders can be rotated to any angle.—*Centralblatt für Augenheilk.*, February, 1886.

Reisinger's Double Hook for Cataract-Extraction.—Arlt has found this instrument useful in cases of extraction, when the fluid condition of the vitreous or the separation of the zonula forbids the usual method of extraction by pressure. Reisinger's double hook originally (1816) proposed for iridectomy has been adapted by Arlt for these cases, as follows. The instrument consists of two sharp iris-hooks capable of being closed, so that practically it is one hook; by moving a stop the hooks separate four millimetres. The instrument is introduced along the posterior surface of the lens with branches closed: when on the other side of the posterior pole the branches are opened, and there are then two sharp hooks, which, embedded in the lens-structure, will bring it out. The manœuvre can be performed by a single hook; but the double one is much more useful.—*Graefe's Archives*, vol. xxxi.

[Two things are to be remembered in connection with an instrument of this kind. All double instruments in which surfaces lie in contact with each other need special attention as to cleanliness. Again, the manipulation of instruments which require the starting of a spring or the opening of a stop after the point is within the eye is difficult. Of course, both of these objections are surmountable with care and practice; but, practically speaking, the simpler an instrument, and the less care it

requires, the more available is it for routine work.—H.]

TREITEL'S TEST FOR LIGHT-PERCEPTION.

This consists of a series of gray squares pasted on a black surface. There are eleven squares in the series, ranging from the brightest gray or white to the darkest or black. The intensity of the color is ascertained by means of a rotation apparatus: a mixture of a given amount of white and black in the instrument affording a given degree of gray. Treitel found that a normal eye, in good daylight, can recognize a gray which corresponds to a combination of white and black in the proportion 3 to 357. (This refers to the relation of the angles under which they are respectively seen.) This proportion is taken as the basis of the series, each succeeding square having one-half the brightness of the preceding one. The testings take place at the distance of one metre, the attention of the patient being directed to finding the darkest gray which appears as a bright spot upon the black ground.—*Klinische Monatsblätter f. Augenheilk.*, January, 1886.

COCAINE IN THE TREATMENT OF HAY-FEVER.

From a paper read before the Northern Medical Association, Philadelphia,

BY E. W. HOLMES, M.D.

UNDER the term hay-fever is included a congeries of symptoms which have for their chief and essential characteristic their periodic appearance, and it is classed under a variety of names, according to the time of appearance or fancied cause,—June cold, July cold, autumnal catarrh, peach cold, rose cold, etc.

The symptoms of the disease are, in brief, a sense of lassitude, in some reaching great prostration; susceptibility and irritation of conjunctival, nasal, and other mucous membranes adjacent and continuous, with marked injection and swelling of these tissues and also of the face; photophobia, and fearful and wonderful paroxysms of sneezing; excessive secretion from the parts affected, cough, and asthma. These are not all of equal severity in every case,—one patient being troubled with the coryza, another mainly with asthma, while a third may go through a course first of catarrhal symptoms, followed, later, by asthma.

I think you will find that, other things being equal, the younger the patient and the more recent the inception of the disease, the greater is the predominance of the catarrh; whilst in older persons and in the more confirmed cases the greater is the suffering from the bronchial and asthmatic symptoms.

In passing, avoiding all argument, I think it is admitted on all sides that there are three factors which enter into the etiology, the question in dispute being as to their relative causative influence: 1, a centric nervous modification, either functional or organic; 2, a peripheric susceptibility (in the passages affected) of the nerves or other tissues, the result of either functional or organic alteration; 3, an external irritant in various, almost multitudinous, forms.

The successful employment of cocaine in other branches of medicine has caused it to be used extensively in hay-fever. There is one thing I beg to insist upon: the need of thorough application. I cannot, therefore, recommend the tabloids I show you here; as passing these into the nostrils and allowing them to slip around at their own sweet will, while proving wonders for the virtues of the drug if of benefit, if useless shows merely the faulty method of application. I hope many of you will try this remedy during next season, and would urge that your observations will be redoubled in value with uniformity of method, of strength of solution, of care in application, with amount of drug used carefully noted.

I would suggest that a four-per-cent. solution be tried, the quantity being measured and applied to the parts with a camel-hair brush as large as will go through the inferior meatus without any force. I recommend *as large as possible*, contrary to some others, as a larger quantity is carried at a time, thereby securing more quickly the desideratum, which is local saturation.

Beginning, then, at the vestibule, paint over three times, waiting between each for the preceding to take effect; then passing along the inferior meatus (where possible), making an equal number of applications; telling the patient to hold his head well back and snuff up as much as possible from the brush into the upper meatus; then anæsthetize the uvula, pharynx, and dorsum of the tongue, and apply the solution to the posterior nares with a curved brush. Now,

waiting say five or six minutes, to allow of the full impression, I make a very simple but very practical test. Pass the brush over the surfaces of these passages, and if the sensation is not completely annulled at every point you must reapply cocaine, as otherwise your labor may be in vain.

Let me cite an illustration of this, the most important point I have to urge upon you to-night.

A gentleman one evening came into my office suffering from his annual visitor. He stated that he had had no rest for two nights; as he expressed it, "had not time between the sneezes to get asleep." I had almost exhausted my supply of cocaine on myself (for I too am a hay-feverite). I, however, used all I had (about f℥j); but, on making the test, I found one spot, high up in the vestibule, which he said gave sensation of inclination to sneeze, the rest of the surfaces being anæsthetic.

The next day, when I called to see him at his office, I found him in a dark room, unfitted for business. He reported but little amelioration, and said he could "feel himself all night sneezing from that point." That evening I made a thorough application, teaching the patient to do it himself, with the best possible results, so that he could attend to business, travel with comfort eighteen miles night and morning, and, finally, actually enjoyed a trip of two hundred miles by rail.

Cocaine does not cure the disease, but simply averts one of the most troublesome symptoms,—*i.e.*, the sneezing.

For the appreciation of this much benefit, you must see or experience an attack. This is no ordinary sneezing. I have frequently, on the street, been compelled to seize some friendly support, blinded and staggered by the violent sternutations. When entering a room, instead of addressing the occupants, I have had to bury my face in my handkerchief and sneeze it out; then, recovering myself as best I might, with a face like the rising sun, with streaming eyes and nose, have braced myself to my work.

All this is ameliorated; so that, instead of being convulsed with successions of ten or twelve every few minutes, I can enumerate them as only of "one," "two," "three" daily. The other symptoms remain, modified, indeed, but for the most part only so far as they had been aggravated by the excessive sneezing. There is still the reddened conjunctiva (though the disagreeable itching can be alleviated by a weak solution of cocaine). There is still too much secretion from the nose and some running from the eyes, still the old-time enervation; and the disease runs its usual course, the cough and asthma recurring as before.

If you could appreciate the severity of the undiminished paroxysm, I feel sure that you would be highly gratified at obtaining this measure of relief.

I feel as if cocaine had more than a mere temporary effect, as the first applications require to be made more frequently and in larger quantity. At first I used f℥ij three times daily; but after two or three days ℥iss thoroughly used in the morning would carry me through the day; though if at any time I felt any irritation on my return home, I would apply the brush dipped in the solution for a moment or two to that point. I doubt not in many cases f℥ss to f℥j daily would suffice.

Cocaine is therefore of use in hay-fever, from its not in itself producing serious symptoms, from its ease of self-application, from the test of its proper and thorough use being so simple, and from the relief gained being so positive.

By contracting the capillaries and cavernous sinuses, it *relieves* in a marked degree the congestion and swelling of the parts, and diminishes the annoying secretions; whilst, by rendering the membranes less sensitive, it arrests one of the most dreaded and most characteristic concomitants of the disease.

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SOME CLINICAL NOTES ON DIETETICS.

BY WILLIAM A. EDWARDS, M.D.,

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IT is my purpose, in these fragmentary notes, to consider diet under three headings,—that appropriate to infancy, to youth, and to childhood,—and, in conclusion, to consider briefly the dietary of sickness, or disease.

The influence of diet upon health is varied by the phases of internal growth and external environment, beginning at birth, when it is considered all-important, and continuing until life's cycle is completed.

With regard to the diet in infancy, it is true that no other food has been found, nor perhaps will ever be invented, which will be as appropriate to the young infant as its mother's milk.

All mothers should nurse their babes for at least six months, unless for good and sufficient reason the consulting physician should deem it inadvisable, but he should weigh the balance well before venturing an opinion. Should it be found that the mother is totally unable to nurse her babe, a wet-nurse will be the next expedient. More particularly will this be necessary if the little patient is in delicate health or has before it the shoals and quicksands of one of our almost tropical summers, which the babe will be obliged to weather should it remain in town. In the selection of a wet-nurse the greatest vigilance should be exercised, or else a perfectly pure nurse may be infected through the babe, or the babe through the nurse.

In this connection it is well to remember the "law of Colles:" "a child born of a mother who is without obvious venereal symptoms, and which, without being exposed to any infection subsequent to its birth, shows the disease when a few weeks old,—this child may infect the most healthy nurse, whether she suckle it or merely handle or dress it; and yet this child is never known to infect its own mother, even though she suckle it while it has venereal ulcers of the lips and tongue." We should never allow a babe with the slightest suspicion of syphilis to touch the breasts of any other woman healthy enough to give the nourishing milk.

We frequently find that our patients are unable to provide a wet-nurse: then the question of a substitution of another aliment for the mother's milk arises.

The *kind* and *quantity* of food required are of the greatest importance: babes need more food in proportion than adults do, and require it more frequently, as their tissues are undergoing such active molecular changes, occasioning more waste and requiring more fuel for rebuilding.

In order to ascertain the daily quantity consumed, M. Parrot weighed infants before and after each feeding with cow's milk.

The number of feedings was six in twenty-four hours. He concludes as follows: "Nine and a half ounces for the first month, nineteen ounces for the second, third, fourth, and fifth months, and twenty-five ounces for the sixth month."

This estimation is for pure cow's milk used without dilution.

Meigs and Pepper mention the case of an infant of four months, in good condition and without symptoms of indigestion, who took thirty-six ounces of breast-milk daily, and another of five to six weeks who took eighteen to twenty-three ounces daily.

As to the *kind* of food required, it is hardly necessary to spend time in restating the almost uselessness of giving much starchy food to young infants, the saliva and pancreatic juices not being very active in young life, although the saliva in some infants seems to be able to digest a certain amount of starch, as stated by Dr. John M. Keating in a paper read before the College of Physicians June 6, 1883. The age of the infant cannot be taken as an indication of this property of the saliva.

Among the many infant foods before the public, those made according to the Liebig formula are probably the best, and of these Horlick's food in many cases is the most acceptable, as in it we have prepared a non-farinaceous food in which the starch has all been converted into sugar, and thus the delicate and easily-disordered digestive organs of the babe have been relieved of the task. It is a concentrated dry extract, containing no starch, and is prepared from wheat flour, the malt so acting upon the flour as to transform it into dextrine and grape sugar. It is J. Lewis Smith's* opinion that in Horlick's food the conversion of starch into glucose and dextrine is complete.

The food is easily assimilable and most nutritious, acting not infrequently as happily as does the mother's milk. Other points in its favor are its alkalinity, its solubility, its relatively cheaper price, and its non-farinaceous character.

For a babe of three months or under, I direct that the attendant shall dissolve, in a half-pint of a mixture of equal parts of warm water and cow's milk, a dessert-spoonful of the food, and feed to the infant by the bottle.

Should the nursling not consume this quantity at one feeding, it is not to be used again, but thrown away, and, when needed, a fresh supply passed into the

* Diseases of Infancy and Childhood. Sixth edition, 1886.

feeding-bottle. For younger children, or those requiring more frequent feeding, we may dissolve a tablespoonful of the food in hot water, when cold add cold cow's milk, stir, and place the vessel containing it in a basin of cold water.

From this a sufficient quantity may be taken, warmed, and poured into the feeding-bottle for each meal. The entire mixture should not be kept warm.

Considering next the diet in youth and childhood, we find that this transitional stage from infancy to adult life requires most careful supervision. The supply need not be so continuous as in the case of the infant, but should be exhibited more frequently than for the adult. Until the child reaches at least fifteen years, he should receive not less than four meals per day: all should be moderate, but sufficient.

Somewhat later, three full meals will be amply sufficient: it is to be borne in mind that several years must yet elapse before complete growth is attained.

The great desiderata at this period of life are digestibility and concentration of food; the nutritive value of alimentary matters is in proportion to the possession of these two qualities.

Over-concentration, however, is not to be desired, as it impairs digestibility, as, for example, over-roasting, frying, salting, drying, or even over-boiling, renders food much less soluble in the gastric juices.

This over-concentration of food is usually manifested by a diminished secretion of urine, with high specific gravity. The urine of the young is normally of lower specific gravity than that of adults. This diminished secretion of the kidney is an indication, other things being equal, for less concentration, more frequent meals, with diminished quantity at each feeding, in order not to over-tax primary and secondary assimilation.

Patients at the age under consideration are peculiarly prone to be affected by toxic agents: hence the water supplied to children should be carefully examined for lead, organic matter, and sewer-contamination.

Fresh milk is particularly liable to be contaminated, either by adulteration, exposure to contagium, or the effects of disease in the cow herself. High-bred cows are not infrequently of a tubercular diathesis.

Until full development is reached, the daily use of wine or alcohol in any form is contra-indicated, except, of course, that it may be needed during illness. The habitual use of alcohol by children hastens puberty, checks growth, and rapidly makes them *habitués*.

The diet of the parturient female may now be considered.

The normal condition of pregnancy is one of plethora, and great care must be taken that this does not become excessive. Many pregnant women crave alcohol for its transient effects: this must particularly be guarded against. Alcohol is taken to overcome the nausea and depression incident to gestation: by this means the sympathetic and reflex nausea is not infrequently converted into dyspeptic vomiting. A mother must bear in mind that her blood and the circulatory fluid of the fœtus are one and the same thing. During lactation, cow's milk combined with Horlick's food makes a very suitable and appropriate drink to be added to the dietary, thereby increasing the secretion of milk.

The combination of milk and this food will be found most acceptable during the exhaustion of childbed, when the appetite is apt to be capricious and sluggish, and the digestion impaired, contra-indicating the ordinary diet.

In *sickness* the diet must be that which will maintain the parts of the body not diseased, and that which will not increase the disease under consideration, and, lastly, the administration of peculiar food for special curative purposes.

It is in the cases of impaired digestion in which the nerve-power and secretion of the gastric organs are deficient that the prepared foods play so important a *rôle*. A rational dietary is, indeed, a sheet-anchor in this class of cases.

In Bright's disease, contracted liver, and increased arterial tension, or in cases of the "triple lesion of clinicians," a milk diet combined with an appropriate quantity of the prepared food (Horlick's) is the method of treatment that offers the best prospect of ameliorating the symptoms.

It is in consumption, in its various forms, that dietetics will be almost the principal successful means of combating the disease. The child of a phthisical mother should at once be weaned, and a wet-nurse supplied, or the child placed upon the method of feeding detailed above.

The drugs that seem to exert the most influence upon the disease are those that in their nature are nearest to foods, as cod-liver oil, phosphates of lime, etc. Their administration should cease, however, as soon as they interfere with the appetite.

The improvement of the appetite is a good criterion of the suitability of a particular climate to the case under consideration. Should the appetite steadily decrease, the patient is to change to another sanitarium. In many nervous diseases, particularly the functional and hysterical, the patient seems more nearly to approach the normal condition towards evening: it is at this time that the principal meal of the day is to be taken.

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NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF MORRIS LONGSTRETH, M.D.

BRIGHT'S DISEASE, A SEQUEL OF RHEUMATISM, AND ENTERITIS SIMULATING TYPHOID FEVER.

THE first case is that of a woman, aged 25, married, a house-servant by occupation. We have been in considerable doubt about the previous history in this case, the woman being a Dane and unable to speak English very clearly. In addition to this fact, she seemed very much confused when she came into the hospital. I cannot say that she was exactly comatose, but her intellection was so clouded that she was unable to give a clear account of herself. We elicited after much trouble the following facts. Six years ago she had an attack of swelling of the limbs, for which she was in a hospital for three months, and at the same time she also had rheumatism. She did not have any cardiac sequel of this rheumatism, or, if she did, it has disappeared, for we can now find no evidence of cardiac derangement. During the following two years she had occasional twinges of rheumatism in various parts of the body, but never severe enough during this period to confine her to bed. Her present illness commenced four weeks ago, when, after exposure to cold, she had for a week chilly sensations, followed by fever, headache, sore throat, and pains all over her body. Soon afterwards her legs and body, as well as her hands, became œdematous; but we learn that the swelling did not commence until after the pain and fever had gone, so that we cannot attribute the swelling to the rheumatism. She came into the hospital on the 8th of February, and for two weeks prior to this time she had been very ill and more or less delirious and unconscious. During all this time she had had no medical treatment until three or four days before her admission, when a doctor was called in. She was principally worried about the dropsy, and it was for this reason that she summoned a doctor. He gave her some medicine, she says, to take away the dropsy. Three days later she was seized with a most violent diarrhœa, which was worse at night.

Upon admission, she was greatly exhausted; her skin was moist, temperature 98°, pulse 100, respirations 28 to 30; tongue dry, red at the tip and edges, and coated elsewhere; and she was suffering from general pains, aggravated, no doubt, by the exposure incident to removal. The diarrhœa was still profuse, the stools being of a light-yellow color, and she was troubled with vomiting. To-day the coating on her tongue is breaking away, but it is still red at the tip and edges, and is very dry. Upon admission, this condition of the tongue was more marked, and it was this, when taken in connection with the diarrhœa, the color of the stools, and the marked hebetude, that led us to entertain the suspicion that we had here a case of typhoid fever. The temperature, however, at first blush might seem to be against this idea, for it was only 98°. But it often happens that in hospital practice cases occur where the diarrhœa and the transportation to the hospital will so exhaust the patient that on admission the temperature will be low, sometimes even subnormal; afterwards it will rise and go on in the way common to typhoid fever. With this fact in view, we were in doubt about this case for two days. But another point commenced to develop clearly which aided us very much. Remember that, after the acute rheumatism had gone, there was a tendency to swelling. Well, now, when we examined the urine, we found that it contained considerable albumen,—no great bulk such as would lead us to believe that she had an attack of acute nephritis, but enough to warrant us in believing that there is a con-

gestion of the kidney,—and, in addition to this, we found hyaline casts and some that were slightly fatty. So it is probable, therefore, that the swelling following the rheumatism six years ago, of which we have heard, as well as that which occurred in this present attack, was due to a renal complication. We must incline to the view that the nephritis was the result of the rheumatism, interstitial nephritis being the most usual form of Bright's disease following rheumatism. We must suppose, therefore, that this disease has been going on ever since the first attack of rheumatism. The œdema that occurred three weeks before admission was probably due to an aggravation of the kidney-trouble, and the medicine given by the doctor was no doubt directed to it. This medicine, acting excessively, produced a catarrhal condition of the intestines and caused the diarrhœa, which was very great. This irritation produced an irritative fever and gave us the rise of temperature. The condition of the tongue favors the idea of a gastro-enteritis produced by irritative drugs. Since she has been in bed, and especially since the purging, the swelling has diminished and the urine contains less albumen, though casts are still to be found.

Now as to treatment. When first seen, she was so much exhausted that in the absence of any history we resorted to stimulation, for which purpose we used whiskey and aromatic spirits of ammonia, and her diet was limited to lime-water and milk. As the diarrhœa was the most prominent feature, attention was directed to it, and she was ordered one-sixth of a grain of carbolic acid and one-thirty-second of a grain of sulphate of morphine every two hours, and later, when the stomach was less irritable and would bear it, she was ordered eight grains of quinine daily, in divided doses. The diarrhœa was gradually checked, her strength returned, the pulse became fuller and firmer, respirations came down to 24 and were fuller and more quiet, and it became evident that she was recovering from the irritation caused by the drug, the action of which must have been very violent. During the last two days all evidences of the irritation have vanished.

Now I want to call your attention to an exceedingly good remedy in enteritis which is frequently used in this hospital. I refer to turpentine,—ten drops of the oil given every three or four hours. In these cases this drug will prove of very great service, particularly if the enteritis be that of typhoid fever. If you talk about the germ-theory of disease and bring it into your therapeutics, and make use of iodine or carbolic acid on the theory that they will destroy these germs, you are treading either on insecure or dangerous ground. In order to give enough of these drugs to destroy the germs, we should be compelled to give such large doses as would prove injurious to the system of the patient; with less we could not even hope to influence the germs. So that I cannot imagine any treatment of typhoid fever more senseless than the so-called specific treatment with iodine and carbolic acid I say you cannot even hope to do any good unless you use very large doses, and if you do, you will have the action of these very irritating drugs on the intestinal mucous membrane. Turpentine I believe to be just as efficient as a germicide as either iodine or carbolic acid, and it does not possess any of their disadvantages. Ten drops of the oil is a very moderate dose. We could give much larger doses with perfect safety, carrying it even to the point where the characteristic odor will be detected in the stools. It will destroy micro-organisms and allay the process of fermentation that is exhibited by the distention of the bowels. Therefore you will find this drug of great service not only in typhoid fever, but also in simple, non-specific enteritis. The diet, as I have said, was simple,—lime-water and milk and beef-tea, in limited quantities.

We can hardly form an accurate opinion as yet as to how far the kidney-disease has advanced, because the woman is too weak. Her whole system is too much deranged by this diarrhœa, and the kidneys have of course partaken of this derangement, so that it would not be fair to judge of their general condition from their present state, or from the present condition of the woman's general health. Of course this purging has relieved the kidneys materially of their usual congestion, so that we cannot now say how much they are altered. When she has recovered her usual health, we will look into the state of these organs and see how much or how little they may be affected.

This is a somewhat curious and instructive case, for kidney-disease is not, as

a rule, a sequel of rheumatism, as it seems clearly to have been in this case. Commonly, the rheumatic poison seems more especially to attack the serous membranes, and we have endocardial trouble; but there is here not the slightest evidence of heart-disease. You should remember this case, as the complication is so rare.

DIFFUSE DERMATITIS.

I desire now to show you a very interesting case of skin-disease. I am not able to tell you much about the history or the cause, as the woman is very reticent on the subject. She is 35 years old, and offers evidences of having lived a very intemperate life, though she stoutly denies that such is the case. For six months past she has had this affection of the legs. While, as I say, she denies intemperance, she admits that since June last she has habitually taken three milk-punches daily and an occasional glass of beer, which she says her doctor ordered her for the benefit of her health. Six months ago this eruption commenced as small red papules confined to the legs and not appearing above the knees. These papules rapidly coalesced: it was a sort of eczematous eruption that ran on rapidly to pustulation and the formation of crusts. You notice that her face is flushed, and she has large, prominent veins in the nose and cheeks, so common in those who have led intemperate lives. Her general condition is that of disordered digestion: she has a coated tongue, her bowels are very constipated, and I would say that the amount of stimulation to which she has been accustomed has been very excessive. Her hands tremble, you notice, when she extends them. There was some interference with speech, and, indeed, when she came into the hospital she was on the verge of delirium tremens. Her heart and lungs are normal, but her liver is greatly enlarged. The urine has a specific gravity of 1014; there is a slight amount of albumen, but no sugar and no casts; it is yellow in color and acid in reaction. Now the legs, you see, are swollen, uniformly dark in color, and covered with crusts; there is much inflammation, heat, and pain about them, though much less now than when she first came in.

It is of the utmost importance in such a case that we should arrive at a correct diagnosis. Here the habits have upset the system, and all the avenues of outlet for the elimination of effete matter that is not properly digested are blocked up. The skin is interfered with in its function of aiding elimination, and as a result the effete matter in it causes inflammation. Even the kidneys are overworked in the effort to remove this effete matter, and as a consequence they are congested, as is evidenced by the albumen. No emunctory is working right.

From these facts we gain the indications for treatment, which should, first of all, be a laxative. Locally we will apply poultices to remove these crusts, and then use oxide-of-zinc ointment. This woman is taking Fowler's solution, five drops thrice daily, and the bromides for the nervousness, which is marked. The improvement has been very decided.

Now let us inquire why this eruption, due to a general cause, has manifested itself only on the legs. The explanation of this fact we find in gravity, the legs being the most dependent portion of the body. It will often come on the part most in use, following the general law of function, just as we note in rheumatism. In washerwomen rheumatism generally attacks the wrists, in letter-carriers the knees, etc. We can call this eczema if we wish, but it is really a dermatitis. Such a patient should be put to bed, that the tension of the part may be relieved. Remember that while arsenic will act like magic in such cases, it will prove absolutely useless if you do not enjoin rest and look after the emunctories. You will often see such persons take arsenic without any benefit; and it is because these collateral conditions are not attended to.

CARDIAC HYPERTROPHY ASSOCIATED WITH BRIGHT'S DISEASE.

Here we have another case where there is some derangement of the urinary function. This woman, who is 31 years old, is troubled with swelling of the limbs. She has a family history of phthisis, though she herself has no trouble of that kind. She came into the hospital two days ago, and, though she was not truly comatose, she was yet so stupid and dull that she could not give us a clear history. As well as we could learn, one month ago her legs, wrists, and face began to swell; later, she was greatly troubled with dyspnœa, headache, and sick stomach. On admission,

her legs were much swollen to a point above the knees, there was evidently fluid in the abdomen, and she had great dyspnœa, being unable to lie down. The lungs were not specially involved in any acute trouble. I now note a wrinkling of the skin of the legs, which tells me that the œdema is not so great as it was. There is not very much albumen, the urine is yellow in color, acid in reaction, and has a specific gravity of 1021; there is no sugar and no casts. Upon examining the chest, I detect a distinct thrill, very much diffused, and it is difficult to say where is its point of greatest intensity. Cardiac dulness is increased in area. I also hear a harsh murmur, with its greatest intensity towards the base, and diastolic in time. It is heard over so large a space that it leaves us in doubt as to which valve is involved, for, in addition to its extent, it can be heard posteriorly. However, I incline to think that we have mitral obstruction; therefore we have in this case cardiac disease associated with disease of kidney.

The treatment has consisted in rest in bed, with ten minims of the tincture of digitalis four times daily. She has also received, as often as required, a pill composed of elaterium, gr. $\frac{1}{8}$, extract. hyoscyami, gr. $\frac{1}{20}$, and ol. gaultheriæ, gtt. j. Now, on account of the kidney-complication, she will be given Basham's mixture (mist. ferri acetatis et ammonii), a tablespoonful thrice daily.

TRANSLATIONS.

Convulsive Spasms.—Georges Guinon, in a paper published in the *Archives de Neurologie*, states that M. Gilles de la Tourette described last year a disease which he named a "nervous affection, characterized by motor inco-ordination, accompanied by echolalia" (repetition of words) and "coprolalia" (filthy language). He says it is similar to the affection described by Beard among the "Maine jumpers," by O'Brien as "latah," and by Hammond as "myriachit." Guinon gives full histories of several cases, in all of which there were motor convulsive spasms, accompanied by varying degrees of coprolalia, echolalia, echokinesia, etc. The family history of all shows traces of nervous disorder, and most of them had insanity in some branch of the family. The tendon reflexes were feeble, but in most they could be made of normal intensity by the method of M. Jendrassik,—*i.e.*, by making the patient perform a somewhat violent muscular act while percussing the tendon just above the patella, etc. One case used to utter "hem, hem," involuntarily. Respiratory tracings by the pneumograph are given in one case. Sharp ascents are shown where he began to get excited and uttered "hem, hem," very loudly. Actions and gestures were also imitated by some patients involuntarily. Some had what is termed "arithomania,"—*i.e.*, the mania of counting before or while doing certain actions. One patient, a ballet-dancer, had violent muscular spasms in all the limbs, especially in the legs, accompanied by involuntary cries. A female hysteric, a typical subject of hypnotism, gave lucid answers to questions when mesmerized; but when her hands were then put on top of her head she invariably repeated the question, giving no answer at all. In the ordinary somnambulic state it was necessary to repeat a gesture a number of times before she could be got to reproduce it, but with her hand on her head she would reproduce it exactly and at once. This condition is termed "echomatia" (ἠχώ μάτος) by M. Marie. One man, reported by Dr. Féré, used to cry "Maria" involuntarily very often, though otherwise perfectly rational, in good social position, and the head of a large business firm. The tie that unites the three phenomena—spasms, involuntary words, and fixed ideas—is simple. They are all of the same family, have the same origin: it is only a matter of degree.

1. Simple convulsive or impulsive motor representation, producing grimaces of the face or spasms of the limbs.

2. More complex convulsive motor representation, producing the emission of a sound, or the pronunciation of a word or phrase.

3. Ordinary convulsive or impulsive ideas, sometimes causing the execution of acts more or less complicated, such as counting, arranging objects in a row on a table, sometimes limiting itself to a subjective idea without external manifestation, such as the sentiment of constant morbid fear.

In conclusion, the name of "Convulsive Spasms" may be given to a disease which, when it attains its greatest degree, is accompanied by phenomena known as

echolalia, echokinesia, and coprolalia, as well as by a peculiar mental condition which is chiefly manifested by fixed ideas. In its mildest form it is only characterized by spasms properly so called,—*i.e.*, grimaces, or involuntary motions of the limbs.

Ethoxycaffeine.—Dr. Dujardin-Beaumetz, at the suggestion of Prof. Filehne, of Erlangen, has made some investigations into the physiological and therapeutical properties of the derivatives of caffeine, and in particular of ethoxycaffeine. Ethoxycaffeine is in the form of white needle-shaped crystals, fusible at 140°, slightly soluble in alcohol and ether, and insoluble in water. It is strongly basic, and forms salts precipitable by the alkalies. It was first made by Fischer, by treating caffeine with bromine and replacing one atom of H by one of Br., thus constituting bromocaffeine, which by alcoholate of potassium is then converted into potassium bromide and ethoxycaffeine. This may be made soluble in distilled water by the addition of salicylate of sodium. It is given in doses amounting daily to twenty-five centigrammes to one gramme, and, as it sometimes causes pain in the stomach, it may be combined with cocaine, as in the following formula:

℞ Ethoxycaffeine, 0.25;
Sodii salicylat., .25;
Cocainæ hydrochlorat., .10;
Aquæ aurantii florum, 60.;
Sirup, 20.—M.

In facial neuralgia it has given decided relief, and even caused sleep, in doses of fifty centigrammes to one gramme in the day. It is in migraine, however, that the happiest results were noticed; in one case a single dose of fifty centigrammes (gr. viij) produced sleep lasting for two hours, and when the patient awoke the migraine had gone. Similar effects were observed in other cases of migraine. Overdoses produced faintness and vertigo, or cramps in the stomach, and nausea. The following conclusions are submitted:

1. The introduction of the group ethoxyl or oxyethyl (OC_2H_5) in the atomic constitution of caffeine modifies its physiological and therapeutical properties, giving it a marked sedative action upon the cerebro-spinal system, and endowing it with incontestable narcotic powers.

2. In the dose of twenty-five centigrammes the therapeutic effects of ethoxycaffeine are especially appreciable in the treatment of migraine, and it has the advantage of substituting caffeine in the treatment of this disease.—*Bulletin Générale de Thérapeutique*, March 30, 1886.

Cubeb-Inhalations in Diphtheria.—Dr. R. Couetoux, in the *Bulletin Générale de Thérapeutique*, reports two cases, aged six and nine years respectively, of diphtheritic croup treated under very unfavorable circumstances, in a cottage with a dung-heap under the window, and containing only one fifteen-feet square room, in which the family lived. When death was apparently imminent, and tracheotomy had been refused as a last resort, he ordered inhalations of steam, tinctured with cubebs, of which twenty-five grammes were placed in the boiler at once, the steam being conveyed by tubes to the beds of the children to be inhaled by them. Both made a good recovery. Dr. Couetoux considers that cubebs is capable of being very easily employed in the form of vapors, and that used in this way against the diphtheria it is more powerful than eucalyptus, glycerin, tar, or the essence of terebenthine. However, he does not urge it to the exclusion of other remedies. In cases where it seems to be too irritating, the addition of glycerin might be advisable. The use of tonics, and rectal feeding when the stomach was rebellious, were also parts of the treatment.

Nitrous Protoxide a Dangerous Anæsthetic.—M. Gréhaut stated before the Société de Biologie that nitrous protoxide does not act as an anæsthetic, but as an asphyxiating agent. Dentists happily describe its effect by saying that their patients "virent," which means that they turn blue. M. Gréhaut believes that deaths from laughing-gas are few because it is used for short operations, but he affirms that it is an essentially dangerous anæsthetic, and that its indiscriminate use ought to be forbidden. M. Lafont has ascertained that accidents have occurred after it has been administered.

For Gonorrhœa.—
℞ Resorcin, 2 to 3 gr.;
Aquæ, 100 gr.—M.
Use as an injection.

Dr. Schwimmer, of Buda-Pest, in *Wiener Med. Presse*, and *Bulletin Générale de Thérapeutique*, March 30.

PHILADELPHIA
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EDITORIAL.

THE MEETING AT ST. LOUIS.

WE do not share the fears, which many have expressed, that the proceedings of the meeting of the American Medical Association at St. Louis will be marred by disorder; nor do we believe, indeed, that a strong factional spirit will be manifested by the friends of either the original Committee on Arrangements for the International Medical Congress or the enlarged Committee appointed last year. We are free from this apprehension, because it is evident that the fortunes of the International Medical Congress are not within the keeping of the American Medical Association, since by its action last year it clothed the enlarged Committee with full power to make all the needed arrangements. This has been done: an Executive Committee has been at work for several months, and has made decided progress in the preparations for the Congress of 1887. At the same time, admitting that the Association has no supervision or control over an independent Executive Committee of another organization, we maintain that the Association may nevertheless voice the wishes of the profession in this matter, and in a proper way still make suggestions to the Committee with a strong probability of their adoption.

We believe that at this meeting wisdom will guide the counsels of the Association, and that its proceedings will be marked by decorum and dignity. This meeting of the American Medical Association is of more than ordinary importance, because its decisions of questions which may come before it, if hasty or ill considered, will seriously impair its future usefulness, if they do not ultimately destroy it by precipitating strife and dissension.

The Executive Committee might be requested, on behalf of the profession, to call a meeting next fall, in Washington, of representatives from the several national societies, and to confer with them as to the *personnel* of the Sections. Who so able to nominate the most acceptable and representative laryngologists in the country as the American Laryngological Association? Similar questions might be asked with regard to the other Sections and the representative Societies of the several departments of medicine. The American Surgical Association should practically have charge of the formation of the Surgical Section, the Gynæcological Society of the Section on Gynæcology and Obstetrics, the Dermatological Association of the Section on Diseases of the Skin, and the Neurological Association of the Section on Nervous Diseases, etc. If this were done, and Da Costa nominated for President, we believe that the Medical Congress of 1887 might be made, if not as successful as the last, still a satisfactory, highly creditable, and truly "International" Congress.

MEDICAL LEGISLATION AND MEDICAL PRACTICE.

SINCE the right to practise medicine is not a natural one, but a conferred or statutory right, it follows—and it is generally conceded—that governments have the authority to regulate the practice of medicine within their own geographical limits. It is to the exercise of this power that civilized countries owe their laws relating to medical practice, which have been framed primarily with a view to the protection of the public from officious ignorance and cupidity.

It was in 1511 that the first statute was adopted in England for regulating the medical profession. The preamble to this

act (3 Henry VIII. cap. ii.) stated that physic and surgery were then practised by "ignorant persons who could tell no letters on a book, and by common artificers, smiths, weavers, and women, who took upon themselves great cures, partly using sorcery and witchcraft, partly applying very noxious medicines to the disease." This statute enacted, under penalty, that no one should practise medicine without passing a board of examiners and receiving its approval. Since then many acts have been passed, all assuming that the authority to regulate the practice of medicine belongs to the government, and that it may be exercised for the purpose of preventing the community from being the prey of incompetent and designing men.

The Registration Act of 1881 has done a great deal of good in this State by requiring all practising physicians to show their legal authorization, and by making this a subject of permanent record. The recent decision of the Supreme Court, however, which requires holders of foreign diplomas to have them endorsed by the faculty of a medical college in this State only after the said faculty has examined and become satisfied as to the qualifications of the applicant, may prove of still greater ultimate benefit to the profession. Incompetent men, perhaps, will never be altogether excluded; but the recent examinations which have been held in Philadelphia of persons holding diplomas from schools outside of the State have revealed in some cases such a surprising amount of ignorance as fully to demonstrate the wisdom of the law and to furnish its justification.

We understand that the Western Pennsylvania Medical College will open in the fall at Pittsburg with a good faculty, and having a curriculum based on advanced ideas upon the subject of qualifications for the medical degree. As there are so few medical schools in this State, it would be very desirable for the three in this city to join with the Pittsburg faculty in the effort to establish a uniform grade of qualifications for medical practice. If this is not done soon, the Legislature will probably pass a law establishing a State Board of Medical Examiners and Licensers, a similar bill to that which was unsuccessfully urged before the last Legislature by the State Medical Society, and which will probably be introduced again next fall.

ACETONÆMIC DIABETES.

IN communications published three years ago in the *Progrès Médical*, Drs. Cornillon and Mallat announced the following conclusions. (1) In the immense majority of cases of diabetic coma, acetonæmia cannot be invoked as the direct, absolute cause of this accident; (2) the reddish-brown coloration caused by the addition to the urine of the perchloride of iron, and the light rose-color by sulphuric acid, are observed not only in the urine of individuals dying with diabetic coma, but also among emaciated, worn-out subjects who have been for a long time glycosuric; (3) these reactions are not pathognomonic of the presence of acetone, and are not in direct relation with the quantity of sugar in the urine; and (4) generally these reactions are not met with in fat diabetics, even when the disease has existed for a long time.

In a paper which appeared elsewhere, the same investigators showed, among the great number of cases of diabetic coma, that in emaciated and feeble glycosuric patients it is not to the presence of acetone that the disorders of cerebration or of nutrition are to be attributed, but to the existence of an alkaline sulpho-cyanide in the system, which they believed to be the potassium sulpho-cyanide.

In a paper just published,* they reaffirm these views, and add that there is only one kind of diabetic acetonæmia, but that

* Le Progrès Médical, April 10.

there are two ways of terminating the morbid process, one rapid and one slow.

In the slow form the patient complains that he is unfitted for all work, physical or intellectual, memory fails, ideas are confused, personal appearance and appetite remain good, but there is feebleness, constant drowsiness, and sense of weariness. In this form four symptoms attract attention: the rapid and marked wasting, extreme feebleness, urinary disorder (polyuria, glycosuria, presence of sulphocyanide, increase of urea, etc.), and a special odor resembling that of ether, chloroform, or apples.

If death ensue rapidly, diabetic coma sets in like an attack of delirium tremens, lasting on the average from one to five days. This is accompanied by excess of sulpho-cyanide of potassium in the urine (as shown by the reddish-brown coloration following the addition of tincture of the chloride of iron) and the accumulation of this salt in the economy. It is essential for the production of this state that the patient shall have been subjected to a recent physical strain beyond his strength; it is not necessary that extreme fatigue should be caused, but only a relative amount: a journey by railroad, accompanied by privation, may and often will produce this result. However, this is a rare termination of acetonæmic diabetes. Where the disease is prolonged, death is commonly due to pulmonary tuberculosis. That the phthisis is secondary is demonstrated by the fact that the emaciation and asthenia are observed antecedently to the appearance of the tuberculosis.

A STATE SANITARY CONVENTION.

THE State Board of Health of Pennvania, in order to stimulate popular interest in State medicine, and for the purpose of publicly discussing the sanitary condition of the commonwealth, has decided to hold a Sanitary Convention, to which prominent sanitarians and officers of boards of health from different parts of the country have been invited. The Provost of the University of Pennsylvania, Dr. William Pepper, will preside, and the address of welcome will be delivered by His Excellency the Governor of Pennsylvania. A large number of communications have been promised upon topics directly affecting the public health, the prevention of sickness, and improvement of the conditions of living. The sessions will be held at McCaull's Opera-House, on the 12th, 13th, and 14th instant. Morning, afternoon, and evening sessions will be held, and the public has been cordially invited to participate in the proceedings.

A number of distinguished visitors will be present, and a full programme will be issued within a few days. A dinner will be given at the St. George Hotel on Thursday evening, May 13.

NOTES FROM SPECIAL CORRESPONDENTS.

BOSTON.

A CONSIDERABLE share of recent events of professional interest in this city has been connected with legislative action. First in order of importance has been the establishment, or rather the re-establishment, of a State Board of Health. Some few years ago, as is already known to many of your readers, the functions of this Board were combined, for alleged reasons of economy, with others, under the somewhat heterogeneous title of Health, Lunacy, and Charity. Governor Robinson in his last message having recommended the separation of the Health Department from the others, and a committee appointed by the Massachusetts Medical Society having urged the matter upon representatives and others, the bill has passed and become law. An effort by certain homœopaths to seize this occasion for obtaining "recognition" for their dogmas was made, but without success. The new Board, whose make-up is not yet announced, is to consist of seven members, and the secretary is to be the only salaried officer.

A measure has also passed, perhaps to the surprise of some who voted for it, making it an offence for any one to give or to sell tobacco under any form to children under

the age of sixteen years, excepting only the parents of such children. The difficulties in the way of the enforcement of such a law, it is evident, will be considerable. The use of tobacco, particularly in the form of cigarettes, among young lads is a great and growing evil in our large cities, and probably no class in the community is more sensible of its magnitude than the doctors. Yet probably moral suasion, accompanied in some cases by well-applied corporeal persuasion on the part of the parents, would accomplish more in the right direction than legal prohibition. Unfortunately, there are a great many parents who care too little about the matter to trouble themselves whether their boys smoke or (what is an equally pernicious habit accompanying cigarette-smoking in some of our public schools) carry pistols in their pockets.

The paper-manufacturers have felt themselves much aggrieved at the action of the Boston Board of Health requiring the disinfection of rags brought into this port, even when accompanied by consular certificates of the freedom from infectious diseases of the port of export, or of adequate disinfection having been performed before the rags were shipped. Several hearings have been held by the Committee on Health of the city government, at which testimony has been offered by medical men and others that no case of cholera or smallpox is known to have been transmitted through foreign rags, and that the process gone through here (which, by the way, is done in the bale by a disinfecting company, holding a special contract and charging the importer five dollars per ton for all rags thus treated) is inadequate, in that it does not raise the temperature in certain parts of the bale, as shown by self-registering thermometers placed by the petitioners in some bales packed abroad for the purpose of the experiment, higher than 120° F. This temperature would of course, so far from destroying any germs that might exist in the rags, enliven them and increase their virulence. The Board of Health has also, unfortunately for its position, been led, through the blunder of one of its own inspectors, into ordering to be disinfected as filthy rags merchandise which was invoiced as clean, new rags, and which on further examination proved to be really so. The commercial interests involved in this question of practical sanitary science, through the diversion of imports from this port to others where less strenuous restrictions are enforced, are so great that the hearings have been largely attended.

Legislative committees have also given hearings upon a petition to prohibit the use of arsenic in wall-papers and other domestic fabrics, and on a petition allowing the city of Boston to take a water-supply from the Shawsheen River at a point some thirty miles north of the city, and to abandon the Mystic supply, which, as I have remarked in previous letters, is becoming unsuitable for domestic uses from its contamination by the numerous and growing mechanical industries of its densely-populated watershed. The Shawsheen, on the other hand, is claimed to have a small population, and no manufactories likely to pollute the water.

The report of the local Board of Health for the year 1885, recently issued, shows a death-rate for Boston of 24 per 1000, which must be admitted, if the estimate of population is correct, to be a high proportion. Yet the absolute number of deaths is less than the two years previous, and the number of "preventable" deaths is only 19.5 per cent. of the total mortality, whereas ten years ago it was 7.33 per cent., and three years ago 25 per cent. This progressively lowering ratio has now reached a point comparing favorably with every other large city, except, I believe, Philadelphia, where it is about the same. Consumption, of course, heads the list of fatal diseases, and, with bronchitis and pneumonia, accounts for one-fourth of the deaths. Other deaths (of a total of 9618) were—from variola, 2; measles, 84; scarlatina, 156; diphtheria, 334; croup, 125; pertussis, 26; typhoid fever, 152; erysipelas, 40; puerperal fever, 20; carbuncle, 7; dysentery, 62; diarrhœa, 170; cholera morbus, 30; cholera infantum, 461; cerebro-spinal fever, 19; pyæmia, 11; septicæmia, 31.

The work of the Board has included the repairing of house-drains, 4238; cleaning and repairing vaults, 3958; traps supplied, 1297; and a vast deal of other cleaning of yards, water-closets, cellars, passage-ways, garbage-receptacles, removal of swine, fowls, cows, manure, etc.

The number of public baths taken showed a large increase—namely, 13,584—over the previous year, amounting to 762,730 by men and boys, and 197,035 by women and girls. The number of places disinfected for all causes was 76,615. The work of the Board also included the inspection of the abattoir, the 11 public urinals, 19 registered infant boarding-houses, and 9 lying-in houses.

Such work as this will tell in any of our cities, should cholera make us a visit.

C. F. W.

Boston, April 9, 1886.

Oleomargarine.—The Connecticut Legislature is considering a bill which requires hotels, boarding-houses, and restaurants, if they use oleomargarine, to post notices stating this fact where all the guests can see them. Every baker who uses the imitation must hang out a sign, and even the wagon he employs to deliver bread to his customers must bear the sign "oleomargarine used here." For fear that the purchaser may not see the sign, the dealer is obliged to tell the customer that he deals in the sham instead of the real article. A law of this kind, if enforced, would prove quite troublesome to the man who wanted to sell oleomargarine but hardly dared to.

PROCEEDINGS OF SOCIETIES.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held January 6, 1886, the President, Dr. J. M. Da Costa, in the chair.

THE DISPOSAL OF SEWAGE, AND THE PROTECTION OF STREAMS USED AS SOURCES OF WATER-SUPPLY. BY COL. GEO. E. WARING.

(Continued from page 547.)

I have recently had an opportunity of carrying out a rather complete system of sewage-disposal in your near vicinity, in connection with the State Asylum for the Insane at Norristown. As I have endeavored there to work according to the best indications of modern experience, and as my efforts have been freely sustained by the Trustees of the Asylum, I know of no way in which I can better set forth what seems to me the best method for disposing of sewage than by describing, somewhat in detail, the work that has there been done and the result thus far achieved.

The Asylum is situated on high land in the northeastern suburbs of the city, on the watershed of Stony Creek. The buildings include eight large pavilions, with the necessary administration buildings, kitchens, laundries, etc. The population of the institution is now not far from sixteen hundred. The consumption of water is not far from one hundred and fifty gallons per head daily, and all manner of organic waste, except the garbage which is fed to swine, must necessarily be disposed of through the system of house drains and sewers with which the institution is amply supplied.

As at first constructed, the system of drainage, delivering not only foul wastes but roof- and surface-water as well, discharged its contents through a large main sewer running in a southerly direction, entering a brook which delivers, in a short distance and with a steep incline, into Stony Creek near the hospital station of the railroad.

Although the ample facilities for the drainage of such an institution afforded by Stony Creek had been a chief inducement offered by the city of Norristown for the location there of the Asylum, the buildings had not long been occupied before complaints were made of the gross fouling of the creek due to the hospital drainage.

Following the erroneous idea which is so prevalent, that the chief source of defilement in sewage is fæcal matter, two immense settling-tanks were established in the grounds for the retention of these solids only, the effluent, enriched by the products of their putrefaction, overflowing into the sewer and running into the creek. As urine and kitchen wastes are quite as bad in their ultimate condition as is fæcal matter, and much more serious in amount, this process did not long satisfy the complainants, and an injunction was threatened to prevent the discharge of any sewage from the hospital into the stream. In consequence of this threat, the authorities engaged me to devise and carry out some other system of relief. What has been done is as follows.

The old system of drains and sewers has been left as it was, to carry off roof-water and surface-water from the courts, walks, etc., these finding their way into Stony Creek through the old channel. A separate system of sewers, six inches in diameter, has been constructed in connection with all of the foul waste-pipes of the building, so that they carry all kitchen and laundry waste, bath and toilet waste, closet discharges, and dining-room and pantry-sink waste,—everything, in short, which contains foul refuse. For lack of sufficient appropriation, some changes that it was thought desirable to make in the interior plumbing of the buildings were not made. It was attempted to substitute water-closets with traps for the untrapped closets already in use. These latter have their outlets connected with ventilation-pipes in which a strong current of air is maintained by the use of steam,—a very expensive process. They are also flushed by automatic cisterns in such a way as to consume a very large volume of water. The trapped closets, with independent flushing cisterns to be worked by the use of the seat, would have effected considerable economy, but it was found that the odor produced during their use, especially in the morning when used in rapid succession, could not be kept out of the wards without the introduction of a new system of apartment-ventilation. This experiment was therefore abandoned, as too costly in construction, and the old method of forced-downward ventilation continues, in spite of the cost of its maintenance.

The dining-room sinks were subject to the usual difficulty from the accumulation of grease. Such sinks as are to be retained were supplied with a flushing outlet, which is accomplishing a most satisfactory result. The same system was applied on a very large scale to the kitchen sink, which is so arranged that its outlet is ordinarily kept plugged. When discharged, from fifty to one hundred gallons are delivered at a time through a four-inch pipe; this sweeps all grease and other refuse rapidly forward and constitutes an effective flush for the kitchen drain, which formerly gave trouble even with a large grease-trap and with the occasional introduction of a jet of steam.

The system of sewers described is brought together to a single main outlet six inches in diameter, constructed, like the branch sewers, of vitrified earthenware pipe. This main sewer delivers into one corner of an open tank forty feet square and about six feet deep, built of brick laid in and coated with Portland

cement, and having a Portland cement concrete floor. It is probably absolutely tight. Immediately in front of the inlet (the mouth of the main sewer) there is a vertical iron screen, with one-half inch openings, for holding back paper, rags, a small part of the fæcal matter, and the miscellaneous rubbish delivered from the buildings. In the corner of the tank, diagonally opposite the inlet, there is a vertical Rogers field annular siphon, the overflow of its discharging limb, eight inches in diameter, being five feet above the floor of the tank. About a foot below the overflow-level, and through the south wall of the tank, there is a four-inch opening which is ordinarily kept plugged. At the bottom of the tank and connected with the main discharging chamber outside, there is a pipe through the wall closed by a screw-gate.

This flush-tank—the largest, I believe, that has ever been constructed—has a capacity between its floor and its overflow-point of sixty thousand gallons. It occupies about two hours in discharging, and during this time about fifteen thousand gallons more flow in from the main sewer, so that the total amount discharged at each operation averages about seventy-five thousand gallons.

The discharging siphon is so arranged that when sewage begins to overflow at the top of its discharging limb its outlet becomes sealed, its contained air is soon withdrawn, and it discharges, full bore, until the tank becomes empty, when air is taken, first at the inner end and then at the outlet end; the siphon "breaks," and nothing more can be discharged until the overflow begins again. The discharging chamber delivers into an eight-inch pipe which leads to the irrigation field.

In the course of the main drain, above the tank, there is a gate by which the flow can be diverted from the tank and sent through a by-pass directly to the eight-inch pipe. Below the tank there is another gate by which its discharge may be diverted to a truck-patch near by whenever sewage is required for irrigation there. Higher up in the truck-patch there is a sewage-carrier which is connected with the four-inch hole near the top of the tank. By a proper adjustment of these different arrangements sewage can be sent from the buildings directly to the irrigation field without going through the flush-tank, or can in like manner be diverted to the lower carrier of the truck-patch. By opening the gate at the bottom of the tank, sewage is allowed to flow out as it flows in, and can be sent in uniform moderate quantity to the irrigation field or to the truck-patch. By removing the plug near the top of the flush-tank, the upper carrier of the truck-patch can be made to receive sewage for four or five hours, but, as the entering stream is too large to be completely removed at this point, it in time reaches the overflow and starts the siphon, and the whole accumulation is discharged through this.

These truck-patch carriers, the by-pass and the various gates, are incidents of the system, and are intended only for occasional use: ordinarily, the discharge is in a strong flow through the main eight-inch pipe connecting with the irrigation field.

Around the whole interior of the tank, near its top, there is a perforated brass pipe connected with the main water-supply by a float-cock at the bottom of the tank. This sends a spray over the walls of the tank during about an hour, partly before the discharge is complete and partly during the earlier filling of the tank. Its purpose is to wash down accumulations of slime which might in hot weather become offensive. This part of the apparatus is to be removed during the winter season.

The irrigation field proper is about one thousand feet distant, and its upper side is twenty-seven and a half feet lower than the outlet of the flush-tank. This field is separated from the hospital grounds by a public road and by Stony Creek. Its lowest side is nearest to the grounds, and its higher or farther side is bounded by a mill-race a little above its highest level. The area of the field available for irrigation is about twelve acres. Lying to the north of it is a piece of waste land, two or three acres in extent, which has been arranged for use as a relief area in emergencies. Along the upper side of the irrigation field, bordering the mill-race, is a deep trench, with sloping grassed sides and with a planked water-way at the bottom, for catching and carrying away the infiltration or overflow of the mill-race. Immediately inside of this ditch is the main sewage-carrier, which extends from one end of the field to the other, and has a fall of one to six hundred from its highest point, which is midway of the field. At this highest point there is a circular well, six feet in diameter and seven feet deep, measuring from the top of its wall, which is a little higher than the surface of the ground. The eight-inch discharge-pipe delivers into the bottom of this well, which thus serves to check the velocity due to the rapid fall of the connecting sewer. At its top there are three semicircular openings, two feet wide and one foot deep. One opens into the north carrier and one into the south. The third opens into another carrier which leads directly toward the middle of the field. Ordinarily, only one of these openings is used at a time, and one is sufficient to deliver the whole flow. The north and south carriers, the banks of which are lower toward the field than toward the mill-race, overflow with much uniformity, and deliver the sewage at the top of a well-graded inclined surface, over which it runs until absorbed. In no case does the sewage run quite the whole distance across the field. Movable gates being set at one point or another, the whole tankful of sewage may be delivered at pleasure over any area of from

two to four acres, according to the inclination of the surface and its condition of saturation by rain or its dryness.

The carrier which runs toward the centre of the field delivers into a level ditch which surrounds a level tract about two acres in area. This is crossed by a series of parallel ditches three feet wide and two feet deep, separated by beds or banks eight feet wide. These beds are to be used for the cultivation of vegetables, forage, osiers, or whatever may be thought most advantageous. They receive their sewage solely by lateral absorption.

This level tract constitutes a relief bed capable of receiving several tankfuls of sewage in succession, and resembling somewhat the "intermittent filtration" beds used in England.

The whole of the field outside of the level tract is now sowed with rye and grass, and is already well covered. It is intended to use it as grass-land only, and with the relief that can at all times be afforded by the level tract, by the emergency field to the north, and by the truck-patch, it need never be overflooded, and the sewage may at any time be kept off from any part of it long enough for harvesting. Judging from the experience of similar fields in England, it will be necessary to crop it three or four times during the season.

A considerable element of the cost of the work was due to the very unfavorable character of the ground, which, like that of the whole neighborhood, is a very heavy, stony, argillaceous deposit, underlaid by a stratified limestone, sometimes at a depth of two feet or more, sometimes lower than it was necessary to excavate. A sort of swale ran through the field from end to end, the land being higher at the bank of the creek than here. It was crossed with ditches, largely occupied by a tussock swamp due to a heavy underlying stratum of clay, and its old fence-rows and ditch-rows were overgrown with willows and other trees.

The cost of the preparation of the land was not less than eight thousand dollars, including underdraining, grading, uprooting trees, etc.; that is to say, it cost this amount to put it into the condition of a reasonably well graded, cleared, and naturally well drained field. That part of the cost would be avoided where land of proper character is available.

One item of the preparation consisted in the laying of over twenty thousand feet of draining tile at a depth of from five to eight feet, more than half of which required rock cutting from a few inches to two feet in depth. It should be said that the rock is so fractured that water easily finds its way down to the level of the tiles. The underdrains are generally twenty-five feet apart.

The surplus water of the soil was substantially all removed by the digging of the ditches, so that when the tiles had been laid and covered during dry weather they discharged a very small stream. It took a long time to get the stony filling of the underdraining ditches so compacted and solidified as to prevent the direct flow of water from the surface to the tiles. Even now there are some voids which have not been detected and filled, and some water flows directly from the surface to the tiles during the application of sewage. It soon ceases, and the effluent is clear within half an hour after the tank ceases discharging. In a short time this difficulty will be corrected, and it will always be clear.

The above is a brief and rough description of the general arrangement of the work. Its operation, so far as observed, may be thus explained;

All of the water-closets in the wards are flushed out at intervals of four or five minutes with a copious discharge from automatic tanks. This flow runs directly to the new sewers, and is sufficient in amount to maintain, day and night, a constant cleansing flow. The water-closets in the administration buildings and officers' quarters are operated by hand. They are all in direct communication with the same sewers. So, also, are the urinals (automatically flushed), and the wash-sinks and baths of the whole establishment; also the sinks in the various dining-halls. Such of these as are not to be abandoned on the completion of the new refectory buildings have been provided with flush-pots, by which their wastes are held back until accumulated to the amount of six or seven gallons, and then they go forward with a rush and in mass to the sewers.

The whole series of kitchen sinks are connected with a similar apparatus, by which, as above stated, from fifty to one hundred gallons at a time are discharged into the sewers through a four-inch outlet. The laundry apparatus from time to time contributes its very copious flood to the volume of the sewage.

Probably in no case does more than fifteen minutes elapse between the emptying of any vessel in the establishment and the arrival of its discharge at the flush-tank. Within certainly less than twelve hours, and often less than eight hours, the tank, becoming full, discharges the whole accumulation into the main outlet-sewer leading to the irrigation field. The stream, running out through one or other of the carriers leading from the well, overflows its banks and spreads over the land. This complete process may take two and a half hours: so that if we add together the extreme limits of time we have less than fifteen hours between the discarding of waste matter and its application to the surface of the irrigation field.

It is safe to say that putrefaction exists nowhere at any time throughout the whole system, and there is never at any point the least suggestion of the putrid odor inseparable from common sewers and cesspools. The only element in the mass which in its fresh

condition is malodorous is the fæcal matter: as this is distributed through and drowned by not less than two thousand times its volume of water, it counts for nothing as a source of exhalation. The whole flow might be discharged on the lawn in front of the administration building without offence, save to the eye.

A few small coprolites withstand the rough usage of the current and are carried on to the ground, but they are so few and so very far between as not to be noticeable. Whatever solid matter passing through the screen is lodged on the surface of the field is destroyed by natural processes everywhere active. In no case is the amount of such matter or the effect from it worth noticing.

The real filth of the sewage—its dissolved and finely-divided suspended matters—is carried into the ground, is retained there, and is destroyed by oxidation, and, through the activity of bacteria, by nitrification. As filth, it cannot pass through the soil nor very far into it. If the products of its resolution are not consumed by plants they pass off with the underdrainage, as soluble salts devoid of all organic character and unaccompanied by the lower forms of organic life.

After a few days' use of a single tract, the sewage is turned to another tract, and again to another and another, being allowed nowhere to run long enough for the closing of the ground against infiltration by clogging, or for the gorging of its interior spaces with impurities. In short, the process of purification is complete and continuous. Experience elsewhere indicates that the soil will in time improve in its purifying power from year to year for a long time.

There are larger examples of the purification of sewage by irrigation elsewhere in the world, and examples of which the lesson is enforced by long experience. There is, so far as I know, no example in existence more carefully arranged as to its details, involving the overcoming of greater natural difficulties, or better illustrating the more modern technical methods of the art.

I may be excused for suggesting that this example, so near to your own doors, points out the way in which the sewage of the towns now draining into your own water-supply may practically, and without too great cost, withhold their filth from their drainage, making the Schuylkill once again a fit source from which to draw household water.

Another method of disposal by application to the land, which is especially applicable to isolated houses and to establishments where the discharge cannot be removed and must be concealed, is what is known as "sub-surface irrigation," a process invented by the Rev. Henry Moule for use in connection with the earth-closet, and first applied systematically by Rogers Field, Esq., an English engineer, in connection with the drainage of some cottages at Shenfield, in Essex. Its use in England has never extended very much.

In this country its first application was in connection with my own house at Newport, in 1869. After ample experience and observation of its efficiency, I began to use it in my private practice as an engineer, in disposing of the sewage of isolated houses. In 1876 I had become so confident of its success that I applied it to the sewage of the whole village of Lenox, Massachusetts. In 1879 it was applied on a still larger scale at the Woman's Prison at Sherburne, Massachusetts, and in 1881 to the hotel at Bryn Mawr. The details of this system have been very materially perfected, and its use is now common in many parts of the country, there being hundreds of examples in New England, and probably as many within a radius of ten miles about Orange, New Jersey. The Lenox work, being the oldest of the larger ones, and the one longest in use, may be taken as an illustration of the system generally.

Lenox was a scattering village with less than one thousand persons living in reach of the sewers. The fund available for sewage was small, not enough to lay an outlet-sewer to the river, over two miles distant, to say nothing about work in the town. Indeed, a discharge into the river would not long have been tolerated. At that time (1876) much less was known than now as to the efficiency of sewage irrigation. As the most promising means for overcoming the difficulty, I decided on the adoption of sub-surface irrigation, using ten thousand feet of distribution-pipes, underlying a well-graded area of about one and a half acres. The pipes were laid a little more than one foot below the surface. They were common two-inch agricultural sole tiles, laid directly on the earth. They were divided into twenty lines, with as many connections with the main pipe leading from the flush-tank. The manner of connection was never very satisfactory, and the general arrangement was never entirely successful from the point of view of an expert. However, although the field was but a few hundred feet distant from the village, there was never any serious complaint from it, and there was generally great satisfaction with it, although, as the flush-tank had no settling-basin for holding back solids, —only a strainer,—there was always more or less trouble from obstructions, and as the population increased these obstructions increased, until now the whole affair is in such condition that it seems necessary to reconstruct parts of the work in accordance with methods since universally adopted. At the same time, with all its drawbacks, it has been essentially successful and satisfactory, no nuisance having arisen from it that was perceptible at any distance from the field, and no attention having been called to it by reason of its condition. It has been quoted and visited as an instance of a great advance in the disposal of the sewage

of a village, and it only needs slight improvements to make it available for perfect work for years to come, provision being made for distribution over the surface of the field at times during the short period when the village is full of visitors.

At the Woman's Prison the system was much more correctly constructed, and has been correspondingly more successful, though it is seriously overtaxed with an effluent of about thirty thousand gallons per day; the more especially as the contributing pipes lie in a bed of muck and heavy silt, one of the least successful materials for their use.

At the Bryn Mawr Hotel the same system has always worked satisfactorily since it has been sufficiently extended to deal with the large volume of sewage; but, mechanically considered, this is not a test case, for all of the sewage is received and retained in large cesspools, the absorption drains taking care only of the putrid liquid discharged from them.

After large experience with this method of distribution, I should not hesitate to use it for a community of any size, if it were a mere question of mechanical arrangement and of purification. I should hesitate to use it except where the distribution-ground is in the immediate vicinity of houses, simply because it is much more costly and much less simple than a discharge over the surface, which, as has been amply proved before, and is amply proved now at Norristown, answers every requirement of simplicity, safety, and decency.

I cannot better close this paper than with extracts from a report made on the 25th day of July, 1885, to the Chamber of Deputies of France by M. Bourneville, a deputy, submitted in the name of the committee appointed to examine the proposed law having for its object the agricultural utilization of the sewage of Paris and the purification of the Seine.

I adhere as closely as possible to the original text, thinking that, as former statements about this work have been disputed, a close translation is more important than a freer rendering in English. M. Bourneville says,—

"The vast experiment at Gennevilliers comes in its turn to confirm the great laws of natural purification and agricultural restitution, attested by the numerous examples that we have collated.

"It was in May, 1869, that is, sixteen years ago, that the sewage first reached the land of the plain of Gennevilliers. There had already been for two years (1867 to 1869) several thousand cubic metres distributed by irrigation or treated by chemical reagents at Clichy on an experimental field, where the pumps now stand; a certain number of vegetable products had been obtained on about two-thirds of an acre. The experiment transported to the other side of the Seine, at the beginning of the plain of Gennevilliers, began in 1869 on six hectares (fifteen acres) bought by the city of Paris and retroceded by it to several well-disposed cultivators. The disasters of the war came and destroyed the first installations; they were put into condition again at the commencement of 1872, and since then the service has been regularly performed. On the 3d of June your Commission visited in detail the pumping-station of the city of Paris and the plain of Gennevilliers. We have gathered together on the ground and in the documents placed at our disposal the most circumstantial information on the results obtained."

The report then describes the character and arrangement of the pumps, connecting pipes, distribution pipes, etc., and continues:

"The volume of sewage sent into the plain of Gennevilliers, which was only 1,765,621 cubic metres in 1876, was 15,000,000 in 1880, and finally 22,493,992 cubic metres in 1884. From 1872 to 1885 there have been spread on the plain of Gennevilliers 157,000,000 cubic metres.

"The irrigated surface has undergone a corresponding development. Beginning with fifty-seven hectares in 1872, it reached one hundred and twenty-one hectares in 1874, two hundred hectares in 1875, four hundred and fifty hectares in 1880, and finally six hundred and sixteen hectares on the 1st of January, 1885. The sewage is distributed over the tracts by about twenty laborers, each of whom is charged with the supply of from twenty-five to thirty hectares and with the management of about thirty outlets. In view of the extreme division of the property and the diversity of culture, the volume of sewage delivered into the plain is distributed so uniformly as to require no reservoir and no 'regulator;' simple stand-pipes placed near the steam pumps and at different points along the pipes regulate the pressure.

"During the season of active vegetation, the cultivators are present on the fields during nearly the whole day to the number of about fifteen hundred men, women, and children; they lead the water into the ditches from the distribution-outlets with a care and a skill which would leave nothing to be desired in the best irrigations of the south of France. During the three or four months of winter, vegetation is only partial; the laborers then interfere more directly; they cause the sewage to flow in the gutters and trenches in such a way as to insure purification by oxidizing action; the solid portions remain in the gutters and form a paste which the peasants afterwards incorporate with the earth in the first ploughing of spring. This is the case especially for cereals; the vegetable products utilize the winter deposits in the form of a top-dressing of the beds.

"At Paris, as at Berlin, this formation of the deposits and the irrigation continue during the greatest cold, sewage-water having always a temperature of at least 5° or 6° (40° to 44°

Fahr.). This was realized in the severe winter of 1879 and during the three weeks of continuous frost of last winter. During great floods of the Seine the pumps are generally stopped, leaving to its flow the removal of the entire discharge of the main sewers."

Then follows a table, showing that in 1884 the volume of sewage used in irrigating, per month, varied from 1,205,358 cubic metres in February, to 2,766,782 cubic metres in July. The monthly average for the year was 1,874,491 cubic metres.

"At the time of the visit of your Committee, the volume delivered to the cultivators each day reached from 130,000 to 140,000 cubic metres for every twenty-four hours. More than one-half of the sewage of Paris was purified and utilized by the plain of Gennevilliers during the heated term and during low water of the Seine,—that is to say, at the time when the discharge of sewage into the Seine is specially objectionable.

"The results obtained in the plain, from the point of view of cultivation, are most remarkable. Your Commission traversed, during more than two hours, fields covered with products of the greatest variety and abundance: vegetables of all sorts, cereals, grass, and nurseries.

"They obtain generally 20,000 to 40,000 head of cabbage per hectare, 60,000 heads of artichokes, 10,000 kilogrammes (over 100 tons) of feeding beets, and five or six cuts, yielding from 80 to 100 tons, of green forage. The gross product obtained per hectare varies from 3000 to 10,000 francs ($600 to $2000) and even more for crops.

"It has been said, in the presence of the Commission, that the horticultural products of Gennevilliers are of bad quality. It has been written that *the vegetables produced by this soil, surcharged with infected water, are bad to the taste, and the forage offered to live stock is not nutritive, and is, besides, rejected by them.* On this point here is the opinion formulated in a special report to the Agricultural Society of France by Mr. Michelin."

Then follows a table showing that the six hundred and sixteen hectares were occupied for the growth of cabbage, artichokes, potatoes, asparagus, salads of various sorts, peas, carrots, beans, parsley, onions, beets, lucerne, grass, sundry vegetables, nursery stock, trees, and cereals. Mr. Michelin says,—

"The Society has, through its committees, always observed the results obtained in the horticultural experiments which have shed light on this question, which we in the horticultural world of Paris regard as solved from the practical point of view, with reference to the beauty of the products, their quality as to taste, the success of the production, and the certainty of sale. In affirming the quality of the vegetables to be proper for the nutrition of men as well as of animals, it should be explained that the liquid ought not to be put in contact with those parts of the plant which are above ground, but only with their roots."

The Committee asserts that "all the vegetables of Gennevilliers are advantageously sold in the *Halles*, as well as in the markets of the environs. They carry off the first prizes at the horticultural exhibitions of Paris, and even of Seine-et-Oise. About eight hundred cows are fed with the aid of the irrigated grass and plants. The average dose of sewage used by a hectare, divided over the whole surface dedicated to irrigation, is about forty thousand cubic metres a year. It is really, if we include what is not used directly, about fifty thousand cubic metres. Certain parcels, specially treated, under an arrangement with the cultivators and by way of experiment, with high doses, have been receiving for three years eighty thousand cubic metres by regular irrigation summer and winter. They are covered with a luxuriant vegetation.*

"The rental value of land which was formerly from 90 to 150 francs a hectare ($7.20 to $12 per acre)—we speak, of course, of the cultivated land—is now from 450 to 500 francs ($36 to $40 per acre) in all the irrigated area. As to the selling value, it is from 10,000 to 12,000 francs ($800 to $960 per acre). All leases now accepted by the cultivators carry the provision that the high rent is not consented to except on the condition of sewage being disposable for the leased land.

"The commune of Gennevilliers asked and obtained, by the treaty of 1881, that for a period of twelve years the sewage should remain at the disposition of its inhabitants as freely as they should desire, whatever might be the projects and works of the city of Paris for the extension of irrigation (elsewhere).

"Irrigation with sewage has, therefore, brought wealth to Gennevilliers. Notwithstanding the evidence of these results, there is among the adversaries of the present project one who maintains that this wealth is an illusion, and that in reality the irrigation has caused to Gennevilliers an irreparable wrong, because no one seeks this locality for the construction of villas. The answer is simple: we take it from Mr. Francisque Sarcey: 'The population, which was not dense,' says he, 'cultivated more or less well a rebellious soil. They had only to scratch the ground to meet the sterile sand and the arid gravel. A few country houses had pushed in here and there around Gennevilliers itself; but it was by exception, *for the emigration of the Parisian bourgeoisie in search of villas passed to one side and pushed generally farther on.* Those who had stopped there could have been seduced only by the cheapness of the land. It seemed that this country, struck with a sort of malediction, was never to lift itself from this condition, when, in 1869, the Sewer Commis-

* At this rate, one acre would purify the sewage of over five hundred persons at forty gallons per day.

sion of Paris selected it as the theatre of an experiment which was to produce a happy change in its appearance.'

"The purity of the subsoil water, which receives all of the water filtering from the irrigated land, is perfect. M. Pasteur has testified to this with his high authority before the Committee.

"All may judge of this as your Committee has done by the examination and the tasting of the water that flows out of the five lines of drains eighteen inches in diameter which surround the village of Gennevilliers and discharge into the Seine about one kilometre from each other. These drains, having a total length of about eight kilometres (five miles), have been established at a depth of four metres (twelve feet) at the normal level to which it was desired to reduce the subsoil water; in the case of floods, or of very heavy irrigation, these drains facilitate the outflow of the water and prevent the invasion of quarries and cellars.

"As M. Marie-Davy, Director of the Observatory of Montsouris, testified before the Committee, the water of the drains is chemically pure. It contains barely 0.001 gramme of organic nitrogen to the cubic metre even at those points, as in the experimental basins of the gardens belonging to the city of Paris, where the annual or continuous dose reaches and passes 80,000 cubic metres per annum. With Liebig's bouillon, which shows 62 microgerms in a cubic centimetre of water of the Vanne, 1410 for the Seine at Bercy, and 20,000 for the sewage, there are found only a dozen inoffensive micro-germs in the water of the drains, which thus sustains the opinion of M. Pasteur. At the same time, the large content of chlorine, 0.07 of a gramme per litre, indicates the presence in the subsoil water of a large proportion of purified sewage which has passed through the ground.

"The sanitary condition of the commune of Gennevilliers leaves nothing to be desired; the Mayor and his Adjuncts, Doctors Thobois and Cornilleau, testified before the Committee at its visit to Gennevilliers, and it is enough to walk about in the plain and see the vigor and good health of the hundreds of men, women, and children who are working eagerly [avec ardeur] in the midst of the irrigated fields to understand the true state of the case. The *general mortality* in 1865 was 32 per 1000. In 1876 and 1881 it was only 25 and 22. No epidemic of typhoid fever has existed for long years, although the irrigations were continued on a large scale during the cruel epidemic which attacked Paris in 1882. Not a single case of cholera occurred in 1884. Never from 1869 to this day, although the inhabitants eat their own vegetables, even uncooked, has there been observed a single case of *anthrax* or *septicæmia*. In fact, all of the information that we have gathered from most of the physicians who have had occasion to be called to Gennevilliers proves that intermittent fever shows itself very rarely, and that the number of cases does not exceed that of localities more or less remote, and of which the fields are not subjected to irrigation.

"Still another argument pleads in favor of the excellent sanitary condition of Gennevilliers,—that is, the increasing growth of population, as shown by the following table:

1st of January,		1869,	2186 inhabitants.
"	"	1872,	2218 "
"	"	1880,	2389 "
"	"	1885,	3245 "

"Such are the facts that your Committee has established in the plain of Gennevilliers: it has been constantly accompanied by the authorized representatives of the population of the plain and its suburbs: MM. Pommier, Mayor, and Retrou, Adjunct, of Gennevilliers, Berthou, Mayor of Saint-Ouen, Hennape, Mayor of Puteaux, our friend M. Bailly, Mayor of Courbevoie, Honorary Inspector-General of Public Assistance. A deputation of the cultivators of the plain gave the Committee all the information as to details that it needed. No discordance was developed; the unanimity was complete concerning the excellence of the results obtained and the absolute innocuity of the system. The majority of your Commission cannot refrain from expressing to you the confidence that these demonstrations give it in proposing to you the continuation and extension of sewage irrigation."

The publication of this report must have been most gratifying to M. Durand-Claye, the champion and the wise and eager director of the work at Gennevilliers, who has fought its battles against prejudice, ignorance, and malice from the days of its struggling infancy to this hour of its complete triumph and his own.

At Gennevilliers, as at Croydon, Berlin, Dantzic, Breslau, and the Norristown Asylum, complete evidence is set before us of the absolute efficiency of the system of purification by application to the soil, which, it seems to me, on the score of economy and of completeness, as well as by reason of the conditions generally prevailing in this country, has such advantages over the best of the chemical systems that it is, in at least a very large majority of cases, better suited to our needs.

Nor can it be doubted that this system will enable us to restore and to maintain the purity of our water-courses, especially when these are used as the source of water for domestic use.

PROFESSOR AUSTIN FLINT'S SUCCESSOR.—The Trustees of the Bellevue Hospital Medical College have appointed Edward G. Janeway, M.D., to the chair of Professor of the Principles and Practice of Medicine, lately occupied by the late Dr. Flint.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held March 3, 1886, the President, Dr. S. WEIR MITCHELL, in the chair.

J. H. Musser, M.D., read a paper entitled

NOTES OF A CASE OF RAYNAUD'S DISEASE AND OF GANGRENE COMPLICATING DIABETES MELLITUS.*

Thomas G. Morton, M.D., presented a

CASE OF SPINAL CURVATURE THE RESULT OF UNRECOGNIZED ASYMMETRY IN THE LOWER LIMBS.

I shall occupy the attention of the College for a few minutes in showing a case of marked spinal curvature the result of asymmetry in the lower limbs. The history is briefly as follows. The patient is from Wyoming County, Pennsylvania, aged 24. He was a puny boy until about the age of fifteen. He then grew rapidly, and gained his height, which is now five feet eleven inches, in the course of fifteen months. He has never been sick in his life, with the exception of the ordinary ailments of childhood. While growing rapidly, he noticed when lifting a stone some pain upon the right side. He has never experienced pain, except when lifting weights, —never while lying down. He has been a student of medicine for two and a half years. Sitting on hard benches has caused considerable spinal ache. A year ago the diagnosis was made of serious necrosis of the lower dorsal and lumbar vertebræ. For this, a plaster jacket was applied. During the past four or five years there has been a constantly increasing lateral curvature. On examination I found a marked spinal curvature, with lameness. Looking at him as he passed in front of me, I noticed great asymmetry in the length of the lower limbs. This had not been recognized before. I found it necessary to use a block an inch and seven-eighths in thickness to bring the right limb to its proper length as compared with the left. With this elevation the spinal curvature almost entirely disappeared; careful measurements also confirmed the shortening of this limb. It has been a little difficult to determine whether, at the time he commenced to grow more rapidly, there was any involvement of the spinal nerves which impaired nutrition of the affected side, which involved not only the upper part of the body but the lower part as well. My experience in lateral curvature is that in the absence of asymmetry of the lower limbs almost all curvatures arise from some morbid condition of the spine, as seen in infantile paralysis. There is generally more or less muscular atrophy and permanent deformity in cases of marked lateral curvature. This is seen in the diminished size of the upper and lower extremities of the affected side in most of these cases. It is barely possible that when this patient commenced to grow, at the age of fifteen, development did not take place in the right side and lower extremity; but against that theory examination shows that the thigh and calf muscles are equally developed; the only variation is the unequal lengths of the limbs. I therefore believe that this want of development is congenital. The patient has always had difficulty with the heel of the shoe upon the right side, which would wear out differently from that of the other.

He now has no spinal tenderness, except when in the deformed position. He is unable to stoop very well, but before the application of the plaster jacket, less than a year ago, all of the spinal movements were normal and he was quite a gymnast. He ascribes the present condition to the use of the jacket. The unnatural pressure perhaps led to a partial absorption of the intervertebral cartilages upon the right side, and this may have caused more or less fixation of the vertebræ.

In many cases asymmetry in the lower limbs produces a slight amount of lateral curvature with pain. A careful measurement of the limbs will detect this at once. I have seen a number of such instances.

Dr. W. W. Keen said: It seems to me that, in standing with his foot on the block, the patient's right buttock was higher than the left. This appears to be confirmed by examining the line of the anterior superior processes of the ilium. The deformity appears to be overcorrected by the block one and seven-eighths inches high, and the shortening less, therefore, than was stated. I should like to ask Dr. Morton whether there is any explanation with reference to the causation of the trouble.

Dr. De Forest Willard said: If this be simply a case of lateral curvature, how does Dr. Morton account for the marked rigidity? Rigidity is rare in lateral curvature except in the late stages. It is difficult to determine in this case whether rotation has occurred, on account of the inability of the man to stoop. The pressure of a gypsum jacket for so short a time should have produced relaxation and atrophy rather than stiffness.

Dr. Morton, in conclusion, said: I think the want of symmetry in this case is congenital. With reference to the slight overcorrection of the deformity, it may be that this block is a little high, but the only way we have of noting when the asymmetry is overcome is by the eye, and the absence of lameness in walking.

Lateral curvature of the spine frequently occurs in hip-joint disease. One reason that it does not occur in many cases is that the shortened limb is provided with a proper shoe apparatus. I did not say that absorp-

* Will appear in next issue of the TIMES.

tion of the intravertebral substance had occurred, but I think it possible. I think it probable that in the course of six months or a year the now slight unrectified curvature may disappear. In order to support the spine in every direction, I have the patient supplied with an ordinary spinal brace.

As I have said, the spine was perfectly pliable until the plaster jacket was applied and worn a number of months. This may have had some influence in stiffening the spinal column. The patient has never had symptoms indicative of Pott's disease.

PHILADELPHIA ACADEMY OF SURGERY.

A STATED meeting of the Philadelphia Academy of Surgery was held April 5, 1886, the President, Dr. D. Hayes Agnew, in the chair.

Dr. Thomas G. Morton read a paper entitled

REMARKS ON TRACHEOTOMY, WITH SPECIAL REFERENCE TO THE AFTER-TREATMENT.

In discussing the treatment following the operation of tracheotomy for croup or diphtheria, a brief reference to the manner of opening the trachea is necessary.

The incisions made into the windpipe are usually either vertical or elliptical. It is preferable, however, in all cases to remove a portion of the trachea, for although a tube can readily be inserted by the aid of the dilator when simply an incision is made, yet the removal of an elliptical portion is subsequently more satisfactory, for if from any cause the tube has to be taken out for cleansing purposes or otherwise, or if the tube cannot be tolerated, the ample size of the opening already made will be sufficient for respiration if the soft parts are kept well apart by retractors. If it is the intention of the operator not to use a tube, cutting out a portion of the trachea is of course necessary.

So soon as the operation upon the trachea is completed, air rushes through the aperture, and almost at the same instant air is expelled. At this moment detached portions of false membrane are frequently forced into the tracheal opening, causing obstruction and attendant symptoms, and necessitating the prompt use of the tracheal forceps or sponges. When no fragment or mass of false membrane appears, the tube can immediately be introduced; after which the difficulty in breathing gives place to an improved respiration, the general excitement lessens, the circulation is more normal, and the child (nearly exhausted) revives, becomes quiet, and often falls into a quiet sleep.

If there should be any difficulty in introducing the tube, either from the depth of the trachea, movements of the parts, or otherwise, the tracheal dilator will prove most serviceable; indeed, this instrument can be used to keep the opening free for the entrance of air and for cleansing the part for some time before the tube is placed in position.

The tube, as well as the canula, should at intervals be removed and thoroughly cleansed, the canula of course very frequently. I have known great difficulty in breathing slowly come on, with symptoms of asphyxia, which would have soon resulted fatally, from the tube becoming almost entirely blocked up and not suspected, while the canula was quite clear. The secretion which accumulates in such cases is very tough, and so dense that no impression can be made on it by any effort to clean it except by the aid of the instrument-maker. This condition of the tube is more frequently observed in diphtheritic cases. So that the attendant should always have an extra tube; indeed, an additional tube should always be on hand.

The after-treatment of tracheotomy occasionally may include the necessity for artificial respiration where, on the completion of the operation, life appears to be extinct. In such a case there is no time for delay; the lungs must be instantly inflated by the mouth applied directly to the tube, even at the risk of infection, or the air must be conveyed through some apparatus, should such be at hand.

I operated in such a case, with the assistance of Dr. William Hunt, on a boy 8 years of age, suffering from diphtheritic croup. All respiration had ceased, there was no pulse, and life seemed extinct. The simple incision was hurriedly made, the tube was inserted, and it was not until the lungs were inflated a number of times by the father of the child, his mouth being applied directly to the tube-opening, and artificial respiration kept up for some time, that the child revived. In this case excellent recovery ensued. The father, however, contracted a sharp attack of the disease, but recovered.

The tube is held securely but lightly in position by a piece of tape which is carried around the neck. The opening of the tube is protected by a strip or two of gauze, which should be first immersed in hot water or lime-water, and frequently changed. This is not only soothing to the parts, but it prevents the entrance of any foreign substance and gently tempers and moistens the inhaled air.

The tissues adjacent to the tracheal wound often become covered with false membrane, and the discharges from the trachea are irritating and copious. These should be immediately removed, and absorbent or antiseptic cotton applied. Later, if hemorrhage from the granulations in the wound should occur, it can readily be controlled by ergotin or phenol sodique, or other hæmostatic.

When a tube is used, there can be no fixed time in any case when it can permanently be removed. As a rule, however, when the pa-

tient takes ample nourishment, has recovered strength, and the false membrane is found only in fragments and softened, and with no disposition for its re-formation, showing that the inflammatory stage of the disease is probably past; when respiration can easily be maintained through the larynx on closing the tube or after removing it; and if the child has a voice, and if the wound is healthy,—then it will be quite safe to remove the tube permanently. Should there be subsequently any recurrence of decided obstruction, it can be re-introduced.

The tube can seldom be dispensed with under twenty-four or forty-eight hours generally, and in pseudo-membranous croup it can be worn until the fourth day, and sometimes even later with advantage; in diphtheritic disease generally it cannot be dispensed with so early.

The constitutional—by this I refer to medicinal—treatment may be required in some cases after tracheotomy where the laryngeal obstruction has come on early and been rapid in its course, demanding an early operation. In such a case the soft parts above the seat of operation from their appearance may suggest the internal administration of mercurials, salines, or other remedies; but, as a rule, when tracheotomy is performed the inflammatory stage is over or nearly so, and the exhausted patient requires simply a supporting and stimulating treatment.

In those cases which have come under my observation, no medical treatment has been required. Milk with stimulants has been freely given at short intervals, and forms the basis of the treatment. Occasionally the use of an anodyne by the rectum is required; it is seldom necessary to administer an opiate by the mouth.

In most cases the key to success in the after-treatment of tracheotomy consists in the presence at the patient's bedside of an experienced attendant; indeed, the recoveries in most instances are largely due to the incessant, watchful, intelligent, and patient attention given by those who conduct the nursing, and who rigidly attend to the minor details, and are prepared to combat any emergencies which may arise.

As I have always after tracheotomy employed the tubes, and having had no difficulty in their introduction or subsequent retention, I am consequently without any experience in treating such cases without the instrument; and in some instances, I should think, especially where the trachea lies deep or the child is very restless, the conduct of such cases would be very embarrassing.

It seems hardly necessary to remark that the temperature of the patient's room (which should be as free from all furniture as possible) should be constantly maintained at least at 75° or thereabouts. Only those should be admitted into the sick-room who administer to the patient's necessities. Quietness and avoidance of excitement should be insisted upon.

The air in the room should be gradually changed whenever required, and it should be kept fairly moist by constantly evaporating water by means of a gas-jet or spirit-lamp. The very common practice of boiling lime-water or having lime in the boiling water simply insures the lime's being spattered about the room, and is of no possible advantage.

DISCUSSION.

Dr. William Hunt: I would ask, how far does defective innervation and brain-trouble enter as a cause of death in these cases? I am led to make this reflection from something I read in the morning paper about a curious case out West, where the sentence of a man condemned to be hung was postponed on the ground that he could not be hung, as he was compelled to wear a tracheal tube for an injury to the throat. I think that he could be hung, as the constriction of the neck would cut off the circulation of the brain.

Dr. Brinton: Some years ago I operated in a case of diphtheritic throat and kept the tube in four or five days. At the end of that time I found the cartilages entirely denuded for one-fourth of their circumference. This was limited to the rings involved in the laryngeal opening. I, however, did not attribute it to the tube, but to the diphtheria. I am acquainted with a prominent lawyer who has worn a tube for over twenty years without inconvenience.

I wish also to make an anatomical inquiry. Some years ago I operated on a case of a child with a foreign body in the throat. The isthmus of the thyroid was quite large, and I embraced it between two ligatures and cut it. As soon as the incision was made, respiration ceased absolutely, apparently from the effects of the section. Breathing was re-established by artificial respiration. I have been at a loss to understand why this should occur, but it is probable that some branches of the pneumogastric were indirectly sent to the body. I have cut the thyroid in other instances without unpleasant symptoms.

Dr. John M. Barton: I have seen the tube worn for fourteen months in a case of syphilitic stenosis, and at no time was there reason to suppose that any ulceration or irritation had been caused by the tube.

With reference to those cases in which the breathing stops before the operation is completed, I succeeded in one case in which the breathing stopped perhaps a minute before I opened the trachea, by resorting to artificial respiration in the ordinary way. The child lived for about two days.

The question of after-treatment in these cases is, I think, a matter of great importance. I have never had any difficulty with the operation itself, but my patients perish two or three

days after operation, and many of them in the same way. There is increased secretion, bubbling from the tube, requiring frequent washing out; the child makes more effort at coughing, and generally perishes about that time. The statement has been made that in these cases the disease has advanced; but I must have been singularly unfortunate to have a series of cases in which this happened.

In my last case, I was tempted to employ a method of after-treatment used by a gentleman in this city who claims marked success from it. His plan is to make a sort of tent with heavy bed-clothing. The air within this covering is impregnated with moisture and steam from lime-water. He claims a large percentage of successes from this method. Under it the mucus is much thinned and more readily expelled. I should like to know whether this plan has been used by any of the members present.

The President, Dr. D. Hayes Agnew: My experience with tracheotomy has been very unfortunate. Out of ten or twelve cases in which the operation was performed for membranous croup, I can recall but two that were successful. In regard to the time necessary to retain the tube, every case must be studied by itself. In some cases a few days are sufficient. In other instances the tube must be kept in many days, sometimes for weeks. In order to determine whether or not the tube may be removed with safety, I place my finger over the opening. If respiration can be carried on freely, I remove the tube. I have never seen the trachea suffer from the retention of the metal tube for a long period. I know of cases in which the tube has been worn for many years. In my cases death has usually occurred at the end of two or three days after operation, probably from extension of the disease to the smaller air-passages.

In regard to the re-establishment of respiration where that has ceased, I think that the gum bag might be used, and thus the danger of contracting the disease would be avoided.

I do not see why this operation could not be simplified by opening the crico-thyroid space and dividing the cricoid cartilage. As large a tube as is required could be put in by dividing the cricoid cartilage, and I do not see why this should not altogether substitute tracheotomy.

It is exceedingly difficult to estimate the intrinsic success of tracheotomy. Patients on whom I should have operated if there had been no objections have recovered. I have seen a number of such instances. In the case referred to by Dr. Barton, it may be that the steaming process cures the patient without the tracheotomy.

Dr. Nancrede: I would suggest that in these cases tripsin might be a valuable agent. It has the power of dissolving large quantities of membrane, while it has no effect on the healthy mucous membrane. It may be used in solution of the strength of ten grains of tripsin with thirty grains of bicarbonate of soda to the ounce of water.

I have always looked upon the after-treatment as everything in tracheotomy. I like the gauze cravat, as rendering it unnecessary to keep the air of the room laden with moisture, which has a depressing effect on the general condition. The room may be kept at the ordinary temperature if three or four thicknesses of thin gauze veil folded loosely are kept over the tracheal opening. This renders the air moist and diminishes the risk of contagion to the attendants. I have found that a spray of lime-water across the mouth of the tube will afford relief where a spray of steam will not. My plan is to use the cravat, and every hour or two remove it and spray across the tube lime-water for fifteen or twenty minutes, and occasionally drop a little alkaline liquid into the tube.

In connection with the operation there is a suggestion which I have put in play, and to which my attention was called by Dr. Hodge. The thyroid body and veins are enclosed in two layers of the tracheal fascia, these two layers being attached to the cricoid cartilage. With the ordinary incision high up, it is possible by a small transverse incision to detach the fascia and push down the thyroid body and vessels enclosed in the fascia, and open the trachea low down. This is a very simple operation.

I would urge the great importance of taking the tube out at the end of twenty-four or forty-eight hours, if there is much difficulty in breathing, and the use of the dilator and tracheal forceps. On visiting a patient I have found it livid, but by taking out the tube I have been able with the forceps to remove large masses of membrane from the bronchi. This has been accompanied by marked improvement in the capillary circulation. In this case, however, the disease progressed, and the patient finally died; but if the membrane had not been removed it would have died in a few hours.

Dr. Thomas G. Morton: Where death follows the operation of tracheotomy in children, it is usually the result of asthenia. The tube may be perfectly clear, but the child does not take nourishment or does not digest it. Speaking of the cases that get well without operation, I was recently called at night to perform tracheotomy for croup. As the symptoms were not urgent, I concluded to wait until morning. In the morning the child was no worse. The operation was postponed from time to time, and the child recovered without tracheotomy.

The tube may be worn for a long time without causing irritation. There is a lady in this city who for over twenty years has worn a tracheal tube.

J. E. MEARS, *Recorder.*

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, APRIL 1, 1886.

The President, B. F. BAER, M.D., in the chair.

DR. E. P. BERNARDY read a paper on

THE VALUE OF BINIODIDE OF MERCURY AS AN ANTISEPTIC IN OBSTETRICS (see page 521).

Dr. CHARLES HERMON THOMAS had heard the lecturer with interest, and learned with surprise that cases of so much gravity could be controlled by such simple means as vaginal injections. His practice and belief has been that such cases require the introduction of washes into the uterus, the washing of the vagina being utterly futile. The doctor related an instance in which a quadripara was allowed to die of septicæmia, no effort being made to wash out the uterus, although vaginal antiseptic injections were frequently employed in the case. Six weeks have elapsed since the death of that patient, and in this time the same practitioner has lost three additional parturient patients.

Dr. LONGAKER spoke in support of Dr. Bernardy's practice. We have been led to expect a prompt fall of temperature from the use of intra-uterine injections in septicæmia post partum. His own plan is to discontinue intra-uterine injections after the first thorough washing, unless offensive discharges come from the uterus. He has observed that after the repeated introduction of forceps into the uterus, the introduction of the hand, or other means favoring the introduction of air, a peculiar traumatic metritis results, and to relieve this he has been in the habit of introducing into the uterus an iodoform pencil containing about one and two-thirds drachms of iodoform: this prevents future sepsis (see Lusk, last edition). Prompt lowering of temperature and pulse are the result if this is used after sepsis has occurred, and even when antiseptic uterine injections have failed. The effect of one of these pencils will last through two or three days, when another may be needed.

Dr. HOWARD A. KELLY drew attention to the fact that the biniodide of mercury is almost if not entirely insoluble in water, and that an alcoholic solution would scarcely be admissible. He also called attention to the frequent presence of the bichloride as an impurity. He read the following letter from Dr. Francis L. Haynes:

"In reference to the potassio-mercuric iodide, I may add a little to the facts I mentioned in our conversation. The last case of puerperal septicæmia I have seen in my own practice occurred in Mrs. F., confined December 18, 1885. It was due to the fact that my hands were contaminated with septic matter, and that I trusted entirely to hard scrubbing and to inunction with oil of turpentine to purify them (after Goodell). In this case the pulse was 138, and the temperature ran up to 105°, but she recovered in a few days under copious injections of hot water into the uterus (generally plain, but sometimes with a little carbolic acid added). Three injections were given, and during the days on which this treatment was being used I attended several cases of labor, purifying myself with ten-per-cent. solutions of carbolic acid. These cases had no trouble; but I became ill, as I always do when I use much carbolic acid, and my hands became sore. I now began to use the potassio-mercuric-iodide solution to purify my hands, and since then have had no trouble whatever, although I have attended cases of labor within a few hours after (1) washing out the uterus of a patient of Dr. L.'s suffering from septicæmia (terminating fatally); (2) after amputating finger and metacarpal bone of a man suffering from gangrene of finger and suppurative cellulitis of the hand and wrist; (3) after digging out putrid placenta after miscarriage (several instances); (4) after performing autopsy in a case of suppurative peritonitis and bathing my hands freely in the pus. The solution may be used without apparent injury to purify blunt instruments, and it is certainly a great comfort to soak your speculum thoroughly in it after treating a case of gonorrhœa.

"How is the solution prepared? A four-ounce bottle is marked with a diamond so as to indicate drachms, and filled with distilled water containing ʒj each of potassium iodide and mercuric iodide. (The cost of this solution is less than ten cents.) It is now a very easy matter to make a solution of any desired strength extemporaneously: a tablespoonful to the pint—one part to one thousand—is the strength I generally employ, but after autopsies I use one to five hundred.

"How do I prevent my hands from becoming eczematous when using this solution? Once or twice daily, after washing the hands, and while they are still damp, about fʒss of glycerin is poured into the palm and thoroughly rubbed into the whole surface of the hands, which are then dried as usual. This is very effectual."

Dr. WILLIAM GOODELL has had no experience with biniodide of mercury, but has had with bichloride. He is not sure that Dr. Bernardy is at fault in confining his antiseptic injections principally to the vagina; for where does sepsis usually take place? Not in the uterus, but through wounds of the vagina. In the Charlotte Hospital they have good results from the use of bichloride injections and iodoform. When the Preston Retreat was new they had a good record, but afterwards the percentage of fatal cases became too large. This fault was remedied by the use of bichloride of mercury as a vaginal injec-

tion, and the introduction of ℈j iodoform. The pads to catch the lochial discharges were replaced by absorbent cotton medicated with corrosive sublimate. In the last one hundred and forty cases no rise of temperature has occurred during the puerperal period. In these cases the antiseptic applications were all directed to the lower portion of the womb and the vagina. Dr. Bernardy is probably right. A solution of one to two thousand is too strong, and will produce soreness after operations. He does not like to have the patient on her side during and after the removal of the after-birth, as it favors the entrance of air into the vagina, as in Sims's position. She should be on her back.

Dr. HARRIS inquired if Dr. Bernardy did not use uterine injections after the removal of the dead fœtus. The presence of a decomposing fœtus, with unbroken membranes, within the uterus has a remarkably prostrating effect upon both mind and body of the mother.

Dr. GITHENS described a case of post-partum septicæmia in which an offensive leucorrhœa, which had existed before labor and which had been neglected, was the apparent cause. In this case vaginal injections of potassio-mercuric iodide quickly relieved the undesirable symptoms.

Dr. THOMAS thought vaginal injections would be quite sufficient as a prophylactic agent, but would it be considered sufficient if septic peritonitis were present? One thorough uterine wash first, and then iodoform pencils to prepare for subsequent vaginal washes. In Bellevue Hospital uterine injections are always used when vaginal washes fail to reduce the temperature.

Dr. BERNARDY uses the first injection himself, and thoroughly washes out the uterus, and continues the injections until the fluid comes away perfectly clear. The firm contraction of the uterus eliminates the liability of absorption there, and the principal abrasions and absorbing surfaces are undoubtedly vaginal. The results at least have been satisfactory. Another point is this: the position of the patient on the back renders it impossible for all of the injected material to flow out at once, and, in consequence, the mouth of the uterus continues bathed for some time in the antiseptic fluid.

When the mercuric iodide was first used, its insolubility was the first thing to overcome. The results of the experiments are the pellets which are exhibited to-night.

The pellets exhibited are quite soluble, and are chemically pure. The biniodide has been tested for bichloride, and none is present. The potassium iodide present merely aids in the solubility without affecting the chemical composition of the mercuric iodide. He has found the preparation non-irritating, and has never had his attention called to its producing eczematous eruption on the hands of the nurses.

Dr. WILLIAM GOODELL read a paper by Dr. Hiram Corson, on the statistics of three thousand and thirty-six cases of labor.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held April 14, 1886, JOHN C. PETERS, M.D., President *pro tem.*, in the chair.

Dr. G. C. FREEBORN presented, in behalf of a candidate, a specimen of colloid carcinoma of the caput coli; Dr. W. P. NORTHRUP, one of chronic localized endocarditis; and Dr. W. M. CARPENTER, one of renal calculus weighing one hundred and forty grains.

Dr. G. C. FREEBORN, from the Committee on Microscopy, reported on the tumors removed from the abdominal wall by Dr. Sims and presented at the stated meeting of the Society held March 10. The growths had the gross appearance of little nodules of fat. On microscopical examination they were found to be surrounded by a fibrous capsule to about one-third of their extent. Two of them contained marked hemorrhages; one contained quite a large nodule of sarcomatous new growth, and extending through the fatty portion were fibrous processes containing new vessels, and the whole was surrounded by sarcomatous tissue. Nerve-fibres were found in three of the nodules, and in one they were completely infiltrated with small round and spindle-shaped cells.

The diagnosis was "fibro-sarcoma, probably springing from the nerves."

A PECULIAR CONDITION FOUND AT AN OVARIOTOMY.

Dr. H. MARION SIMS presented the specimen, which was removed from a woman 63 years of age, who had enjoyed a fair degree of health until within the last five years, when she noticed an enlargement of the abdomen, for which she consulted a surgeon, who tapped her and drew off quite a large quantity of fluid; she was also tapped twice afterwards, and before Dr. Sims saw her. At the time when Dr. Sims first saw her the patient was anæmic and was losing flesh rapidly, and he decided to give her temporary relief by tapping the abdomen again. He drew off six quarts of a thick fluid, but she did not materially improve. The abdomen began to fill again, and he determined to operate at once, notwithstanding her enfeebled condition. As soon as he made the incision into the abdomen he reached what he took to be a sac of the tumor, and, finding it firmly adherent to the abdominal wall, he began to separate it. After separating it for about two inches, he could feel sudden termination of this apparent wall of the sac, and on closer inspection he found that he had to deal with a broad band about four inches wide, which he continued to loosen from the abdominal wall, and finally pushed it up to one side, when he exposed the

real sac. The tumor had very extensive adhesions, and was removed with much difficulty, and also a great deal of hemorrhage, and was found to be a sloughing ovarian tumor. The broad band was attached to the symphysis pubis and to the bladder, from which Dr. Sims dissected it where it was quite thick, and as it extended upward it diminished in thickness, becoming thinner and thinner, until, near the umbilicus, it was about as thin as ordinary tissue-paper: throughout its whole extent it was not particularly vascular. He was unable to give an opinion concerning its exact nature, and the specimen was referred to the Committee on Microscopy.

NEW REMEDIES AND CLINICAL NOTES.

New Pepsin Preparation.—A new pepsin has been placed in the market by the well-known manufacturing house of William F. Kidder & Co., of New York, under the name of Kidder's Crust Pepsin. It is in scales, and is non-hygroscopic under ordinary circumstances. In its power of dissolving albuminoids, animal tissues, or diphtheritic membrane, this form of pepsin, it is claimed, is twice the strength of any of the ordinary makes of pepsin, as shown by the albumen test. It is quite uniform in composition, free from salt, sugar of milk, and peptones. By actual test, one part was found to dissolve from twelve hundred to fifteen hundred parts of coagulated egg-albumen. The chemist of the Brooklyn Board of Health states that when tested with the beef-process it digests double the quantity that any other pepsin in the market will. Saccharated pepsin, U.S.P., can be made by adding nineteen grains of sugar of milk to one grain of Kidder's pepsin. In this manner of preparing saccharated pepsin it is said that only one-sixth as much is used of this form of pepsin as would be required of other makes. As the price will not be higher than that of other kinds, it is evident that this will be a cheap as well as an efficient preparation.

Antipyrin as a Hæmostatic.—E. Casati (*Raccoglitore Medico*, August, 1885) reports the successful application of antipyrin in four- and five-per-cent. solutions as a hæmostatic. The results attained by its use seem to warrant the following conclusions: 1. Antipyrin is a powerful hæmostatic. 2. It is superior to perchloride of iron, because after its use the wound remains entirely clean. 3. It is superior to ergot, because only in extremely large doses does it manifest a toxic action, while, according to Huchard, it exerts a hæmostatic action whether applied directly to the bleeding part or administered internally. 4. In many cases it is to be preferred on account of its antipyretic as also perhaps for its antiseptic effect. 5. The hæmostatic action is manifested in a very short time. 6. Further observation is necessary to determine its value in controlling secondary hemorrhage. (*Gazetta degli Ospitali*, September 30, 1885.)—*Practitioner.*

A Classical Remedy for Hiccough.—Dr. A. G. Gibson (*Edinburgh Medical Journal*, April, 1886) recommends tickling the nose in a case of hiccough. It is not necessary always to cause sneezing to interrupt the spasm of the diaphragm, but if sneezing should occur the hiccough stops at once. This is in accordance with the aphorism of Hippocrates,—

*Ὑπὸ λυγμοῦ ἐχομένῳ πταρμοὶ ἐπιγενόμενοι, λύουσι τὸν λυγμόν,—**

which Mr. Gibson renders, "Sneezing, occurring after hiccough, removes the hiccough."

MISCELLANY.

American Medical Association. *Special Notice.* To delegates and others who will attend the meeting of the American Medical Association, St. Louis, May 4 to 8.—Parties located east of Buffalo, Niagara Falls, Pittsburg, and Parkersburg will apply by mail to Secretary of Trunk Line Committee, 346 Broadway, N.Y., for certificates. Parties west of points named above and east of the Mississippi River and north of the Ohio River will apply to George H. Daniels, Commissioner C. P. C., Chicago, Ill., for certificates. Parties south of the Ohio River and east of the Mississippi River will apply to M. Slaughter, Commissioner, Richmond, Va. Parties from Missouri River points, and from Chicago, will apply to E. P. Wilson, Arbitrator, Chicago. Points in the West and local points on the lines centring in St. Louis will be arranged for by agent at starting-point or upon arrival here.

Delegates in making application to the above-named persons for a certificate must not forget to enclose a two-cent stamp to pay postage on the return letter enclosing to them the certificate. This must be done to insure the certificate being sent. Any delegate who fails, after making every effort, to get a certificate in due form, will take a receipt from the Ticket Agent at the point from which he starts, for amount of full fare paid by him coming to the meeting; and in this receipt be particular to have named the form and number of ticket, and the road over which he will come. If not directly on one of the lines entering into this arrangement of reduced rates, pay your fare only to it, and then pay your full fare from that point, securing your

* Littré, Œuvres complètes d'Hippocrate, tome quatrième, p. 566. Paris, 1844.

certificate or receipt as above directed. State, County, or City Societies can apply for the number of certificates they may wish, and have the number wanted sent in one envelope, instead of applying individually.

Round-trip tickets from Chicago, Ill., also from New York, Richmond, Va., and Washington City, D.C., by Chesapeake and Ohio Railroad.

Members of the American Medical Association, or members of any medical societies, who may see the above, will please report it to individual members, or their societies, and try to get a notice of same in their city or county newspaper.

R. M. JORDAN, M.D.,
Chairman Transportation Committee,
St. Louis, Mo.

RESIDENT PHYSICIANS FOR THE PHILADELPHIA HOSPITAL.—At the meeting of the Guardians of the Poor held April 26 the following sixteen out of thirty-six candidates examined were elected resident physicians of the Almshouse. They are named in the order of merit: Harriet W. Brooke, E. Matlack, W. S. Shimer, C. E. Woodruff, A. M. Seymour, W. C. Albertson, A. J. Smith, J. E. Porter, H. B. Moore, W. A. N. Dorland, Helena J. Price, W. E. Parke, M. J. Donohoe, N. B. Jamison, T. Diller, E. T. Brady.

THE ILLINOIS STATE BOARD OF HEALTH has turned its attention to medical schools, and, as reported in the daily press, will hereafter refuse to recognize diplomas from medical schools which annually, for a period of five years, graduate forty-five per cent. of their aggregate matriculates. This rule may act with great hardship upon the innocent holder of a diploma obtained in good faith from a school which, for some reason or other, experiences a notable reduction in its classes.

DR. JOHN S. BILLINGS, Surgeon U.S.A., has been invited to deliver the address in Medicine before the British Medical Association, in the place of Dr. Austin Flint, deceased. This is a well-deserved compliment not alone to Dr. Billings, but also to American medicine, which he will fitly represent.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION will hold its Eighth Annual Meeting in the hall of the College of Physicians, Philadelphia, on May 27, and remain in session for three days. Harrison Allen, M.D., President of the Association, will preside.

THE AMERICAN MEDICAL ASSOCIATION.—The Rush Monument Committee will meet on Monday, May 3, at 4 P.M., in the large parlor of the Lindell House, St. Louis, Missouri, which will be the head-quarters of the Committee during the meeting of the Association.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION will meet in Philadelphia on the 9th and 10th instants, at the Hall of the College of Physicians. William Pepper, M.D., is President of the Association, and Dr. J. G. Walker Secretary.

PENNSYLVANIA HOSPITAL.—At a meeting of the Board of Managers held April 26, Dr. Edward G. Rhoads was elected Resident Physician. The annual meeting of the contributors will be held on the 3d instant.

JEFFERSON MEDICAL COLLEGE. — The Board of Trustees, on April 26, elected Wm. S. Forbes Professor of Anatomy, at a special meeting called for the purpose.

THE AMERICAN SURGICAL ASSOCIATION held its Sixth Annual Meeting in Washington during the past week. A report of the meeting will appear in the next issue of the *Times*.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 11, 1886, *TO APRIL* 24, 1886.

MAJOR M. K. TAYLOR, SURGEON.—Granted one month's leave of absence on surgeon's certificate of disability, with permission to leave the limits of the department. S. O. 39, Department of the Missouri, April 16, 1886.

CAPTAIN J. H. PATZKI, ASSISTANT-SURGEON.—Relieved from duty at Jackson Barracks, Louisiana, and ordered for duty as post-surgeon at Mount Vernon Barracks, Alabama. S. O. 75, Department of the East, April 12, 1886.

CAPTAIN JOHN VAN R. HOFF, ASSISTANT-SURGEON.—Leave of absence extended eleven months, with permission to leave the United States. S. O. 85, A. G. O., April 12, 1886.

CAPTAIN RICHARDS BARNETT, ASSISTANT-SURGEON.—Granted leave of absence for two months. S. O. 16, Division of the Atlantic, April 12, 1886.

CAPTAIN WILLIAM W. GRAY, ASSISTANT-SURGEON.—Ordered to Fort Maginnis, Montana Territory.

CAPTAIN EZRA WOODRUFF, ASSISTANT-SURGEON.—Ordered to Fort Missoula, Montana Territory.

FIRST-LIEUTENANT REUBEN L. ROBERTSON, ASSISTANT-SURGEON.—Ordered for temporary duty at Fort Snelling, Minnesota.
S. O. 33, Department of Dakota, April 16, 1886.

FIRST-LIEUTENANT PHILIP G. WALES, ASSISTANT-SURGEON.—Granted leave of absence for one month. S. O. 56, Department of the Columbia, April 8, 1886.

FIRST-LIEUTENANT PHILIP G. WALES, ASSISTANT-SURGEON. Granted leave of absence for two months. S. O. 85, A. G. O., April 12, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM APRIL 11, 1886, *TO APRIL* 24, 1886.

P. A. LOVERING, PASSED ASSISTANT-SURGEON.—Ordered to Navy Yard, New York.

CLEMENT BIDDLE, PASSED ASSISTANT-SURGEON.—Detached from "Monocacy," ordered home and wait orders.

H. E. AMES, PASSED ASSISTANT-SURGEON.—Detached from Navy Yard, New York, and ordered to "Monocacy."

M. H. CRAWFORD, PASSED ASSISTANT-SURGEON.—Ordered to Naval Hospital at Washington.

MEDICAL-DIRECTOR W. T. HORD, U.S.N., and MEDICAL-INSPECTOR J. C. SPEAR, U.S.N.—Delegates to the American Medical Association to be held at St. Louis on May 5, 1886.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MAY 15, 1886.

AMERICAN MEDICAL ASSOCIATION.

THE Thirty-Seventh Annual Session of the American Medical Association was held in the city of St. Louis, Missouri, May 4, 5, 6, and 7, 1886. The Exposition-Building, with its two large public entertainment-halls and convenient smaller rooms, appeared admirably adapted for the meeting of such a convention as this Association, as it accommodated all the Sections under one roof. The number of delegates, permanent members, and members by application, amounted to eleven hundred and sixty-three. All things considered, this may be regarded as one of the most successful meetings of the Association which has ever been held. Contrary to the expectation of many, and perhaps to the disappointment of some, there was very little of the factional spirit manifested which had marred the harmony of the previous session. The report of the Committee upon Arrangements for the International Medical Congress, which was expected to renew the fight of last year, was received and adopted without the slightest opposition. The only feature of the proceedings at all likely to attract the attention of a visitor was the fact that a motion made to reconsider was unanimously laid upon the table. This was followed by an outburst of applause, indicating the feeling of relief experienced by the members of the Association. The cordial hospitality and elaborate entertainment tendered to their guests by the profession and citizens of St. Louis contributed materially towards making this a most satisfactory and enjoyable session. Indications afforded at this meeting point to a hearty support by the profession of the International Medical Congress to be held in Washington in September, 1887.

The Association was entertained at grand concerts on Tuesday and Thursday evenings in the Exposition-Building, and at a reception and ball at the Merchants' Exchange on Wednesday evening by the profession and citizens of St. Louis. A number of private receptions were also given on Thursday in addition to the concert, and on Friday, after the adjournment of the Association, the visiting members were taken on a steamboat excursion fifteen miles along the city front on the Mississippi. In addition, numerous courtesies were accorded by the local profession, which were fully enjoyed and highly appreciated.

First Day's Proceedings. Tuesday.—The meeting was called to order by Dr. Le Grand Atwood, Chairman of the Committee on Arrangements, who introduced the President, William Brodie, M.D., of Detroit, Michigan.

The Chairman of the Committee also presented the programme for the meeting, which was adopted.

The President announced that the session would be formally opened by the Rev. Montgomery Schuyler, D.D., who then offered prayer.

Dr. Atwood next introduced Hon. D. R. Francis, Mayor of St. Louis, who extended a cordial welcome to the visiting members on the part of the municipal government and the citizens of St. Louis: to this city he gave the title of "the healthiest city in the United States." He briefly reviewed some of the evidences of recent progress in the healing art, and expatiated upon its future prospects and possibilities.

The address of welcome by the Chairman of the Committee on Arrangements was next delivered by Dr. Atwood, who also read a number of invitations to the Association.

Protests against the admission of delegates from the Philadelphia County Medical Society, New York Academy of Medicine, Davidson County (Tennessee) Medical Society, Mississippi Valley Medical Society, and the Tri-States Medical Society were read and referred to the Judicial Council. Dr. Deering J. Roberts entered a protest also against the admission of the representatives of the Tennessee State Medical Society, which took the same course as the preceding.

Drs. William N. Morrison, H. J. McKillops, of St. Louis, William H. Atkinson, of New York, and O. Manfred Johnson, of Harvard, Illinois, were made members by invitation.

Dr. Samuel Logan, of New Orleans, First Vice-President, took the chair, and Dr. William Brodie delivered the

PRESIDENT'S ADDRESS.

After congratulating the members of the Association upon the continued interest in its meetings, and the evident appreciation of the opportunity it affords of renewing old friendships and of making new ones, he referred to the fact that during the past year three ex-Presidents of the Association—W. K. Bowling, M.D., of Tennessee, John L. Atlee, M.D., of Pennsylvania, and Austin Flint, M.D., of New York—had died. He paid a fitting tribute of respect to the memories of these eminent members of the profession, and, after briefly sketching their lives, he expressed the hope that those who follow might fittingly succeed them. He then reviewed the history of the organization since 1846, and stated that its primary purpose was to elevate the tone of the profession and the standard of the medical colleges and of medical education, in which it had been quite successful.

Only four of the original members of the Society are alive to-day,—Dr. N. S. Davis, A. Stillé, Alonzo Clark, and P. L. Bush, the first two having subsequently served the Associa-

tion as presiding officer. He denounced those medical journals which persistently misrepresent the Association. The official organ of the Society, the *Association Journal*, is now in a flourishing condition. He recommended that two new Sections shall be formed, one on Medical Jurisprudence, and one on Dermatology and Syphilis. He warned the members against assuming the responsibility of prescribing patent or secret remedies, or giving testimonials for them.

No benefit, he believed, would accrue from modelling the Association upon the plan of the British Medical Association, the present plan having all of its advantages without any of its disadvantages. In conclusion he reviewed the work which had been already done for the International Congress, and invited the co-operation of all present in making it a success.

A vote of thanks was tendered to the President on motion of Dr. Murphy, of Minnesota.

A memorial from the Women's Christian Temperance Union was referred to the Section on State Medicine for discussion.

Dr. J. S. Lynch, of Baltimore, read the report of the Committee on Preliminary Arrangements for the International Medical Congress, in which it was stated that the duty assigned to the committee had been performed, and that the affairs of the Congress were now in the hands of an Executive Committee. The report was on motion adopted. A motion to reconsider was made, and by unanimous vote was laid upon the table.

The Amendment to the Constitution offered at the last meeting, authorizing the Sections to nominate their own officers, was adopted after discussion. The Secretary announced the reception of a number of papers not on the programme. On motion, they were referred to the appropriate Sections.

The Association then adjourned to allow the members to select their representatives on the Nominating Committee.

Second Day, Wednesday.—The session was opened at ten o'clock, the First Vice-President in the chair.

The Secretary announced the following committee upon the President's Address: Drs. Murphy, of Minnesota; Garcelon, of Maine; and Gihon, of the United States Navy.

Dr. Nicholas Senn, of Milwaukee, read his annual address as Chairman of the Section of Surgery and Anatomy.

ADDRESS ON SURGERY.

The frequency with which grave complications followed even the most trivial operations before the introduction of the modern treatment of wounds induced the great Hunter to remark, "The necessity for operation is in truth the defect of surgery." To-day, with an improved technique and the means at our disposal which, if properly applied, will furnish almost absolute protection against wound-infection, the surgeon can, with a just source of pride and gratification, confirm the correctness of the assertion made centuries ago by Celsus, "*Quæ manu potissimum curat.*"

Reviewing the status of surgery, and its recent progressive and aggressive manifestations, he declared that operations which a few years ago would have been deemed impossible or unjustifiable have become established legitimate surgical procedures. In obscure, doubtful cases the scalpel is now frequently resorted to, without fear of causing additional complications, for the purpose of making *intra vitam* an anatomical diagnosis. Modern surgery has achieved its greatest triumphs in enlarging the field for the direct local treatment of disease, thus enabling the surgeon to treat with success injuries and lesions beyond the reach of medicinal agents. In the field of abdominal surgery this is most evident. Experimental research and clinical experience have demonstrated that organs and parts of organs which were heretofore regarded as indispensable and essential can be successfully extirpated when they are the seat of injury and disease. The title selected for the address is, "The Present Status of Abdominal Surgery."

A condensed brief account of the more recent advances made in the surgical treatment of injuries and diseases of the abdominal organs interests equally the physician and surgeon. Without trespassing upon the field of the ovariotomist and gynæcologist, he confined his consideration to such lesions of the abdominal organs as present themselves to the physician and general surgeon. It is the especial aim to point out the limitation of abdominal operations and to draw a distinct line between the feasibility and justifiability of such operations.

I. *Penetrating Wounds of the Abdomen.*—The recent papers by Dr. Dennis and Dr. Bryant, published during the past year, were mentioned as indicating the deep interest which has been awakened among American surgeons on this practical and important subject. Dennis has well said, "It is a source of national pride that laparotomy in penetrating wounds and visceral injuries of the abdomen was conceived, developed, and perfected in America."

The necessity of making a diagnosis between penetrating and visceral injury was primarily insisted upon. A distinction between punctured and gunshot wounds of the abdomen is also important from the point of view of a diagnosis and treatment. The former have been shown by statistics to be less likely to be complicated by visceral injury than bullet-wounds, and consequently afford a better prognosis, and do not call so uniformly for treatment by abdominal section. Owing to the frequency of recoveries after stab-wounds without operation, the thoughtful surgeon

must hesitate unless the symptoms are such that the existence of visceral injury can be assumed with a reasonable degree of certainty. In gunshot wounds laparotomy is generally necessary. The brilliant results which have been obtained by Bull, Hamilton, and others in desperate cases of multiple perforations of intestines by operative treatment, afford abundant encouragement for imitation of their practice. The methods advocated are, preventing infection by covering the wound with an antiseptic compress until preparations can be made for more effective treatment, early abdominal section in an aseptic atmosphere (corrosive sublimate in preference to carbolic acid), temperature of room 80° to 90° (F.). Operation has for its objects:

(1) Positive diagnosis; (2) arrest of hemorrhage; (3) restoration of continuity; and (4) removal of extravasation. Exploration by the finger or a probe is never justifiable. After making the incision, hemorrhage should be controlled by ligature. Enterectomy, if necessary, leads to the use of the Gerny Lembert suture for approximation of divided ends of the bowel. Irrigation of peritoneal cavity and sponging with a weak solution of corrosive sublimate should be carefully done, and the toilet of the peritoneum strictly attended to. If any doubt remain of the aseptic condition of the abdomen, drainage is indicated. After-treatment of the patient is of acknowledged importance.

II. *Laparo-Colotomy.*—In cases of rectal cancer not amenable to extirpation, Madelung advises that the colon should be divided across low down, and the peripheral end should be permanently closed by inverting the margins deeply and applying two rows of sutures. A preternatural anus is established by stitching the proximal end to the margins of the wound in the same manner as in forming an intestinal fistula in any other locality. The advantages of this method were briefly advocated.

III. *Subcutaneous Laceration of Intestines.*—Subcutaneous traumatic rupture constitutes one of the darkest chapters of abdominal surgery. Berger insists that laparotomy should be performed in all cases where a diagnosis of intestinal rupture can be made. According to a recent paper by Weir, collapse, rapid respiration, frequent wiry pulse, vomiting, thoracic respiration, emphysema, and absence of hepatic dulness are among the most important symptoms for establishing a probable diagnosis.

After laparotomy, circular resection and suturing of the bowel should be practised in preference to the advice given by Chavasse, Berger, and Verneuil of establishing an intestinal fistula.

IV. *Intestinal Obstruction.*—Schwann has collected one hundred and ninety cases of intestinal strangulation treated by laparotomy, including three cases observed by himself in the practice of Mikulicz. He refers to difficulties of diagnosis, and pleads for early interference. Of this number 64.2 per cent. died, the mortality before the antiseptic treatment being 73 per cent., and since that time 58 per cent.

The cause of the large mortality is the want of appreciation by the physician of the importance of early resort to operative measures. The following causes were then considered: 1, intussusception; 2, enterolithiasis; 3, entero-stenosis; 4, strangulation, including under this term volvulus, torsion, internal hernia, and incarceration by bands of cicatricial tissue. The following rules were laid down by J. Grey Smith for treating intestinal obstruction by abdominal section:

"1. Make the incision in the abdominal line below the umbilicus.

"2. Fix upon the most dilated or most congested part of the bowel that lies near the surface, and follow it with the finger as a guide to the seat of obstruction.

"3. If this fail, draw the intestine out of the wound, carefully covering it, until increase of distention, or congestion, or both, in one of the coils give an indication that the stricture lies near.

"4. If there be considerable distention of the intestines, evacuate their contents by incision, and suture the wound. Never consider an operation for intestinal obstruction inside the abdomen finished until the bowels are relieved from over-distention.

"5. Be expeditious; for such cases suffer seriously from shock. The whole operation ought to be concluded in half an hour."

V. *Enterectomy.*—The experience of Billroth corroborated the opinion, now generally accepted, that primary typical enterectomy and enterorrhaphy should not be performed in cases of strangulated hernia and internal strangulation.

The successful case of Weir of resection of the large intestine for malignant disease was referred to, and his statistics of thirty-five cases analyzed. The propriety of excision of the colon for malignant disease cannot be questioned, and if it be found that the diseased mass cannot be removed an artificial anus can be established at once, with or without excision, which will at least remove the symptoms due to obstruction.

VI. *Rupture of Diaphragm.*—Such cases are so uniformly fatal under the expectant plan that operation would be certainly justifiable.

VII. *Treatment of Peritonitis by Abdominal Section and Drainage.*—The expedient was discussed and recommended in connection with perforative peritonitis, tubercular peritonitis, chronic peritonitis with effusion and ascites.

VIII. *Gastrotomy.*—After reviewing the usual conditions calling for gastrotomy, he referred to Alsberg's collection of one hun-

dred and seven cases in which gastric fistula had been made for various conditions: extraction of foreign bodies, malignant disease of œsophagus, non-malignant stricture of œsophagus, and cicatricial stenosis of the pylorus.

IX. *Pylorectomy.*—Billroth's operation has been performed sufficiently often for pyloric cancer to allow deductions to be drawn as to its justifiability. The operation will be useful in proportion to the early date of the positive diagnosis. Ulcer of stomach is a condition for which pylorectomy has been performed with reasonable success. Of ten cases reported by Kramer four cases recovered; a second operation being required in one in less than a year after the excision.

X. *Gastro-Enterostomy.* — This operation was devised by Wöefler as a substitute for pylorectomy in that class of cases in which, after an exploratory incision, it is found impossible to extirpate the diseased pylorus.

The objection is that the pathological condition is left unchanged.

XI. *Duodenostomy.*—Langenbeck, in 1880, devised this operation for the purpose of establishing a permanent fistula in order to introduce food in which the general condition of the patient precludes the more grave operation of pylorectomy.

XII. *Jejunostomy.*—The results of this expedient, planned and executed by Pearce Gould, and similar to the preceding, have been so unsatisfactory that future attempts in the same direction should be abandoned as incompatible with the true aim and advancement of abdominal surgery.

XIII. *Splenectomy.*—The numerous extirpations of the spleen made by Zesas upon animals have demonstrated that it is not an essential organ, and that its physiological function in the production of blood-corpuscles is adequately performed by vicarious organs, so that we can safely include splenectomy for visceral injuries and local diseases of the spleen among the well-established legitimate surgical procedures.

XIV. *Surgery of the Gall-bladder.*—Cholecystotomy, cholecystectomy, and duodenocholecystotomy were referred to as still theoretical operations, but promising usefulness.

XV. *Injuries and Surgical Affections of the Liver.*—Wounds, abscess, and echinococcus cysts were considered. Where the cyst develops upon the upper surface of the liver, the expedient of opening the chest, as has been done by Israel and Volkmann, commends itself as the safest and most expedient operation.

XVI. *Surgery of the Pancreas.*—The surgery of the pancreas belongs to the future. The physiology of the organ and the symptomatology of the diseases of the organ will lead to the limitations within which excision will be justifiable.

XVII. *Laparo Nephrectomy.*—This operation has a legitimate sphere in cases of large tumors of the kidney which cannot be removed through a lumbar incision. The operation also permits an examination of the opposite kidney, a decided advantage. Huguet extirpated successfully a retro-peritoneal sarcoma which was intimately connected with the kidney in a girl 6 years of age. In this case the renal artery and vein were tied separately. Whenever practicable, the integrity of the peritoneal cavity should be restored by suturing, and, if required, drainage established in the lumbar region.

XVIII. *Laparo-Nephrotomy.*—This operation is indicated in all cases by hydronephrosis and pyonephrosis, in which, owing to attendant circumstances, the lumbar operation cannot be performed; also where a positive diagnosis cannot be made as to the locality and nature of the tumor, and also where there is disease of the opposite kidney, or great general debility of the patient.

XIX. *Tumors of Omentum Majus.*—Primary malignant disease of the omentum, if it could be recognized early, would offer most favorable conditions for successful radical extirpation by abdominal section. Cystic tumors and echinococcus cysts are most favorably located for successful treatment by abdominal section and drainage.

XX. *Tumors of Mesentery.*

XXI. *Retroperitoneal Tumors.*

In conclusion, he reminded the members of the progress made in abdominal surgery in this country, and of the many valuable contributions made to the subject by American surgeons, and called upon them to prize it for the honor of American surgery.

Dr. S. C. Gordon, of Portland, Maine, read the Annual Address of the Chairman of the Section on Obstetrics and Diseases of Women.

ADDRESS ON OBSTETRICS, ETC.

The first subject considered was the duty of the accoucheur after exposure to septic influences. The paper of Dr. George F. French was referred to, and his conclusions endorsed that strict antiseptic methods, if adopted, will enable the accoucheur to resume his work without danger to his patients.

The diagnosis of early pregnancy was next discussed, and Hegar's sign—of increase in the anterior curvature of the uterus, with increased elasticity of the walls—mentioned approvingly. For obstinate vomiting of pregnancy he advised forcible dilatation of the cervical canal below the internal os and lifting the uterus out of the pelvis and supporting by cotton packs or some form of pessary. This will obviate the necessity of resorting to abortion for this very distressing symptom in a great many cases.

The induction of premature labor in cases of contracted pelvis, by introducing a bougie, was declared a useful expedient.

The treatment of parturient women was then considered, and anæsthetics in labor

recommended. The forcible removal of the secundines was deprecated.

Passing to gynæcology, he devoted the rest of the address to the operation of removal of the uterine appendages, familiarly characterized as Battey's, Tait's, and Hegar's operations. Diseases of the uterus and pelvic region are often the hidden causes of symptoms interpreted as "hysteria," a diagnosis which he condemned as doing great injustice to suffering women.

He concluded—

1. That these so-called hysterical symptoms occur almost exclusively in women. That whenever any of them do occur in men they are much less in degree, even if they do not differ in kind.

2. That it is fair to presume, from the first proposition, that it is due to disease of some organ or organs peculiar to women.

3. That they are not due to disease of the uterus alone, for when all apparent abnormalities of the uterus are corrected the symptoms very often are not in the least relieved.

4. That all modes of treatment other than operation have failed to cure, and, in most instances, have not ameliorated the symptoms, even where the disease was believed to exist in the uterine appendages.

5. That the large majority of all the cases operated upon have been entirely cured of the symptoms for which the operation was made, and the remnant have been relieved and are continuing to improve.

6. That it is impossible in a majority of cases to determine by the touch diseases of these organs that will produce the symptoms alluded to.

7. That one can by these symptoms alone make a sufficiently satisfactory diagnosis to warrant the operation.

8. That if, after correction of all well-known and clearly-diagnosticated uterine troubles, these symptoms are not relieved, we are required for the cure of our patient to recommend the remedy.

9. That the operation does not in any case destroy the sexual desire, or in any way unsex the woman, except in so far as it may prevent further child-bearing.

10. That in a large majority of cases requiring the operation the woman is already sterile.

11. That in his own experience the specimens removed have been found so changed by inflammatory action as to be cirrhotic or otherwise destroyed either by softening or cystic degeneration of both ovaries and tubes, with very frequent stenosis of the latter.

12. That a fatal result from the operation is extremely rare, if it be carefully performed and closely and intelligently managed as to the after-treatment. Out of twenty-five cases operated upon there was but one death.

The papers were referred to the appropriate Sections for discussion.

Dr. A. L. Gihon, Chairman of the Rush Monument Committee, presented the following report, which was adopted:

"*To the President and Members of the American Medical Association.*

"Your Committee begs leave to report that in obedience to your resolutions on the 30th April, 1885, at the thirty-sixth annual meeting of the Association at New Orleans, Louisiana, the Rush Monument Committee has been instituted by the appointment of one member from each of the States, Territories, and national services represented in the Association; and the Standing Committee thus organized will forthwith proceed upon the duty intrusted to it by the Association, to wit, the collection of funds, etc., for the erection of a statue to Dr. Benjamin Rush, in the city of Washington, by the members of the profession of medicine in the United States.

"Your Committee appointed at Washington in 1884 by the lamented Dr. Austin Flint, in its report presented at New Orleans, enumerated the monuments which have already been erected at the National Capital in commemoration of the men who have contributed to the national renown, and stated that appropriations had also been made by Congress for statues to Lafayette and Garfield. Since that report, and doubtless in consequence of it, various public bodies have proposed similar memorials to their great leaders. The Church, already represented in the person of Martin Luther, is to have its statue to Wesley. The deaf-mutes have taken action towards the erection of a monument on their beautiful Kendal Green to their eminent teacher Gallaudet. Philanthropy is to have its marble effigy of Peabody; and the intrepid explorers, who have lifted the curtains of dense jungle and rugged mountain upon new lands, are to be personated in him who, greatest of them all, led the way to this new world; while Grant and McClellan, Hancock and Shields, McDonough and Barry, are to be added to the already long array of Presidents and military and naval heroes.

"With statesmen, rulers, soldiers, and sailors, the scientist and the philanthropist, the discoverer and the teacher, the jurist and the divine, all given prominence among the adornments of this beautiful capital city, no further time should be lost by the medical profession in completing its enduring testimonial of one who was not only a great physician and teacher of medicine, philosopher, philanthropist, and accomplished writer, but a fearless patriot and founder of the Republic, a signer of the Declaration of Independence, an officer of the army of the Revolution, and one of the authors of that Federal Constitution under which we now happily live.

"With this announcement, the Rush Monument Committee will at once undertake the work of obtaining subscriptions, which have

been limited by resolution of the Association to one dollar from each member of the profession of medicine in the United States, and receiving such voluntary donations as may be made by persons interested in this great undertaking.

"All which is respectfully submitted.

"For the committee, Albert L. Gihon, M.D., Chairman; George H. Rohé, M.D., Secretary; J. M. Toner, M.D., Treasurer."

"I am directed by the Rush Monument Committee to report to the Association the election of Dr. George H. Rohé, of Maryland, to be Secretary, and of Dr. Joseph M. Toner, of the District of Columbia, to be Treasurer.

"In accordance with the instituting resolutions, the following members resident in or near Washington constitute with the Chairman an Executive Committee, viz.,—Albert L. Gihon, U.S. Navy, Chairman; George H. Rohé, Baltimore, Maryland; Joseph M. Toner, Washington, D.C.; Henry H. Smith, Philadelphia, Pennsylvania; Charles Smart, U.S.A., Washington, D.C.; Preston H. Bailhache, U.S.M.H.S., Baltimore, Maryland; Samuel J. Jones, Chicago, Illinois.

"I am also directed to report that the Committee has adopted rules for the collection and responsible expenditure of the funds collected for the purpose of the monument, and has determined upon Riggs Bank at Washington as the depository of said funds.

"Respectfully submitted,

"ALBERT L. GIHON,

"*Chairman.*"

Third Day.—Session opened by prayer.

The Committee on Arrangements announced some additional invitations.

The Committee on Nominations reported as follows:

The following States were represented: Alabama, ———; Arkansas, P. O. Hooper; California, ———; Colorado, J. W. Graham; Connecticut, J. C. Wile; District of Columbia, J. W. Bulkely; Delaware, ———; Florida, T. O. Summers; Georgia, J. W. Bailey; Illinois, J. E. Owens; Indiana, J. B. Harvey; Iowa, W. Watson; Kansas, C. B. Mottram; Kentucky, W. H. Wathen; Louisiana, Joseph Jones; Maine, Charles E. Webster; Massachusetts, E. W. Cushing; Maryland, George H. Rohé; Michigan, H. O. Walker; Mississippi, P. W. Rowland; Missouri, J. F. Dudley; Minnesota, H. H. Kimball; Nebraska, W. M. Knapp; New Hampshire, ———; New Jersey, E. L. B. Godfrey; New Mexico, W. R. Tipton; New York, E. S. F. Arnold; North Carolina, C. J. O. Hagan; Ohio, H. J. Sharp; Oregon, ———; Pennsylvania, C. J. Lange; Rhode Island, H. R. Storer; South Carolina, R. A. Kinloch; Tennessee, Duncan Eve; Texas, J. F. Y. Payne; Vermont, A. E. Woodward; Virginia, G. B. McCorkle; West Virginia, G. W. Baird; Wisconsin, W. T. Gallaway; United States Army, Ely McClellan; United States Navy, J. C. Speir; United States Marine Hospital Service, W. H. Wyman.

They have the honor to report the following:

For President, Dr. E. H. Gregory, of St. Louis, Missouri.

First Vice-President, Dr. E. H. Miller, of Stillwater, Michigan.

Second Vice-President, Dr. W. B. Welch, of Arkansas.

Third Vice-President, Dr. William H. Pancoast, of Philadelphia, Pennsylvania.

Fourth Vice-President, Dr. William C. Wile, of Connecticut.

Permanent Secretary, Dr. William B. Atkinson, of Philadelphia.

Assistant Secretary, Dr. J. Nevins Hyde, of Chicago.

Treasurer, Dr. R. J. Dunglison, of Philadelphia.

Librarian, Dr. C. H. A. Kleinschmidt, of Washington, D.C.

Committee on Necrology: J. M. Toner, Washington, D.C.; Alabama, Jerome Cochran; Arkansas, C. Watkins; California, Beverly Cole; Colorado, I. H. Hawkins; Connecticut, F. H. Whittemore; District of Columbia, C. H. A. Kleinschmidt; Delaware, L. P. Bush; Florida, R. B. Burrows; Georgia, R. Battey; Illinois, S. H. Montgomery; Indiana, J. F. Hibbard; Iowa, J. Williamson; Kansas, C. V. Mottram; Kentucky, R. M. Farleigh; Louisiana, J. W. Duprés; Maine, A. J. Fuller; Massachusetts, M. G. Parker; Maryland, T. B. Evans; Michigan, H. H. French; Mississippi, B. F. Kittrell; Missouri, L. Bremer; Minnesota, W. W. Mayo; Nebraska, E. M. Whitten; New Hampshire, J. J. Berry; New Jersey, J. N. Quinby; New York, John Shrady; North Carolina, Eugene Grissom; Ohio, J. F. Baldwin; Oregon, ——; Pennsylvania, D. G. Brinton; Rhode Island, C. W. Parsons; South Carolina, R. A. Kinloch; Tennessee, J. Y. Crawford; Texas, J. W. McLaughlin; Vermont, E. F. Upham; Virginia, George B. McCorkle; West Virginia, J. H. Pipes; Wisconsin, S. S. Ridell; United States Navy, J. C. Speir; United States Army, M. K. Taylor; U.S.M.H.S., H. S. Austin; Dakota, Dr. Van Velser; New Mexico, G. W. Hansom.

Committee on State Medicine: Alabama, G. A. Kitchen; Arkansas, J. A. Dibbrell, Jr.; California, F. H. Terrill; Colorado, P. R. Thoms; Connecticut, George B. Porter; District of Columbia, J. D. Patterson; Delaware, —— Ogle; Florida, E. T. Sabal; Georgia, J. A. McGaston; Illinois, J. H. Hollister; Indiana, J. H. Beasley; Iowa, P. W. Llewellyn; Kansas, S. Schenck; Kentucky, William Bailey; Louisiana, C. W. Day; Maine, M. C. Ledwood; Maryland, John Morris; Massachusetts, Ira Russell; Michigan, H. F. Baker; Minnesota, W. A. Stenchfield; Missouri, J. M. Allen; Mississippi, M. S. Crafft; Nebraska,

A. R. Mitchell; New Hampshire, G. P. Bonn; New Jersey, E. L. B. Godfrey; New York, E. S. F. Arnold; North Carolina, C. J. O. Hagan; Ohio, H. J. Sharp; Oregon, —— ——; Pennsylvania, W. Snively; Rhode Island, W. T. Parker; South Carolina, C. Kolbrook; Tennessee, J. B. Bowling; Texas, C. H. Wilkinson; Vermont, H. D. Holton; Virginia, J. E. Chancellor; West Virginia, S. D. Wilson; Wisconsin, C. Alexander; U.S.N., A. L. Gihon; U.S.A., E. McClellan; U.S.M.H.S., W. H. Long; Dakota, — Van Velsor; New Mexico, W. R. Tipton.

Members of Judicial Council: N. S. Davis, Illinois; R. C. Moore, Nebraska; H. Brown, Kentucky; T. A. Foster, Maine; William Brodie, Michigan; James A. Gray, Virginia; D. J. Roberts, Tennessee.

Trustees of Journal of the American Medical Association: P. O. Hooper, Arkansas; A. Garcelon, Maine; L. S. McMurtry, Kentucky.

Place of next meeting: Chicago, Illinois, on the first Tuesday in June, 1887.

Chairman of Committee of Arrangements: Charles Gilman Smith, of Chicago, Illinois.

All of which is respectfully submitted.

P. O. Hooper, *Chairman.*
William C. Wile, *Secretary.*

The following Chairmen and Secretaries of Sections were nominated yesterday:

Medicine, John L. Lynch, Baltimore; J. B. Marvin, Louisville, Kentucky.

Gynæcology, F. M. Johnson, Kansas City; W. W. Jaggard, Chicago.

Surgery, Henry H. Mudd, St. Louis; John B. Roberts, Philadelphia.

Ophthalmology and Otology, W. H. Scott, Cleveland, Ohio; J. H. Thompson, Kansas City.

Diseases of Children, De Laskie Miller, Illinois; W. B. Lawrence, Batesville, Arkansas.

Oral and Dental Surgery, J. S. Marshall, Chicago; E. S. Talbot, Chicago.

State Medicine, George H. Rohé, Baltimore; W. H. Wyman, U.S.M.H., New York.

The Committee on President's Address reported through Dr. A. L. Gihon, Chairman:

"1. That in their opinion it is proper and desirable that this Association shall without delay memorialize Congress in behalf of the pending resolution to appoint a scientific commission of three members of the profession of medicine to visit the habitat of yellow fever in Cuba, Mexico, and Brazil with a view to determine the validity of the claims of Drs. Carmona and Freire to have discovered a means of preventing and modifying attacks of that disease.

"2. That your Committee are not agreed among themselves as to the suggested recession from the recommendation of the use of the metric system in medicine.

"3. That they heartily approve of the suggestion of the President that the Association, having created a Section of Medical Jurisprudence, shall further establish a Section on Dermatology and Syphilis.

"4. That they concur with the President as to the wisdom of the provision that the several Sections shall elect their own officers from among the men of recognized authority and experience in the special work of such Sections; and they are further of the opinion that the efficiency of these Sections will be enhanced by the continuance in office from year to year of the Secretaries of said Sections.

"5. That they endorse the views of the President respecting the Journal of the Association and exclusive proprietary interest of this Association in the papers and reports which are made parts of its Transactions.

"6. That the Association should emphatically denounce the endorsement by certificate, advertisement, testimonial, or indirect approval in any form, of proprietary remedies and appliances, and should instruct the Judicial Council to take action in all such cases without formal presentation of charges; that, in the words of the President, 'The stigma of professional disgrace shall rest upon any regularly educated physician who allows his name to be advertised as the endorser of any patent, secret, or proprietary medicine.'

"7. That it is desirable that the Association shall appoint a committee at this meeting to consider the advisability of amending the organic law of the Association by the establishment of branches, or in whatever other way may be deemed best, and to report thereon at the next annual meeting of the Association.

"8. That they earnestly echo the wish of the President that the members of the profession will cordially co-operate in the effort to make the American session of the International Medical Congress creditable to the country, and attractive and instructive to the foreign members, sacrificing their personal and private piques and disappointments in generous emulation to contribute to that success which had been unconditionally pledged in the invitation tendered the foreign members of the Congress to meet in the United States.

"All of which is respectfully submitted.

"John H. Murphy, Minnesota.
(Signed) "Albert L. Gihon, U. S. Navy.
"Alonzo Garcelon, Maine.
"*Committee.*"

After considerable discussion, and on a call for the previous question, the report was adopted as read, by an overwhelming vote.

Dr. N. S. Davis, of Chicago, Chairman of the Standing Committee on Meteorological Conditions and their Relations to the Prevalence of Diseases, also concerning the Subject of Collective Investigation of Disease in Co-operation with the Committee of the British Medical Association, reported progress.

The committee was continued and the report adopted.

J. M. Keller, of Arkansas, read a report of the Special Committee on Cremation. The subject had been annually before the Association for years, and the committee believed that the time had come when the Association should put itself upon record in condemnation of earth-burial and in favor of cremation.

The report, on a call for the previous question, was adopted. On motion of Dr. Thad. A. Reamy, of Cincinnati, the action was reconsidered, on account of some expressions in the report which were erroneous in form and substance, and too strong in condemning the prevailing method of Christian burial. On motion of Dr. John Morris, the report was then referred to the Section on State Medicine for consideration and final report tomorrow.

A motion offered by Dr. John B. Roberts, of Philadelphia, directing the Secretary of the Association to explain why he had not presented the decision of the Judicial Council in regard to the protest against the admission of the delegates from the Philadelphia County Medical Society, was decided out of order by the President, as the papers were still in the hands of the Judicial Council. An appeal against the decision of the chair taken by Dr. Roberts was not sustained.

Dr. James T. Whittaker, of Cincinnati, Ohio, the Chairman of the Section on the Practice of Medicine, then read his address, taking for his subject

SOME POINTS IN BACTERIOLOGY.

Investigations into the cause of disease represent the third or most developed stage of medicine, having been preceded by the stages of clinical observation and of pathological anatomy.

The etiology of acute infections is comprised under the single term "Bacteriology," the bacterium having come in the course of time to include all pathogenic as well as many innocent micro-organisms. That specific differences exist between different bacteria must be admitted at the outset, while deviations of form and function within certain limits may occur, such as have been observed in floriculture. It is the germ and not the form that is essential. The morphology of bacteria is not simply a question of size and shape, but includes motion, color, affinities for color, and manner of growth.

The different forms of bacteria,—micrococci, bacilli, and spirilla,—their growth into zoöglœa, the question of culture-soils, temperature necessary, need of oxygen, were next considered. The existence of spores, and the division of bacteria according to De Bary into arthrospores and endospores (the pathogenic bacteria belonging to the latter group), and the mode of invasion and dissemination in the tissues of the body, were reviewed, and the statement made that no germs exist in healthy blood, although the intestinal canal contains them (saprophytes) in abundance.

Among diseases produced by germs, erysipelas stands prominent; it is a surface-disease, open to inspection, and has been carefully investigated by Fehleisen and others. Another good illustration of the entrance of a pathogenic bacillus into the organism is seen in diphtheria, in which the dumb-bell bacillus produces deep and extensive layers of false membrane in the fauces, pharynx, and trachea. The glutinous and pultaceous mass thus formed is a quicksand to catch and entangle myriads of micro-organisms. This exists in several layers, the deepest being formed of a fibrogenous exudation which escapes from the blood-vessels and opposes a barrier to the further advance of the bacilli. Breaks in this barrier permit the absorption of the virus emanating from the bacteria or their products to produce the constitutional symptoms of the disease. The invasion of the tissues by the tubercle-bacillus and the formation of the giant-cell were briefly discussed, and the destruction of bacilli by leucocytes referred to. Pathogenic micro-organisms produce the phenomena of disease principally by inducing a toxæmia with virulent products similar to ptomaines.

These investigations indicate the direction of research at present, and also the line of study by which we shall be able to combat the cause of infectious disease in a direct way by specific indication. They show us that inflammation is not the cause, but the effect, of disease which is caused by infection, and show us the direct road to cure through comprehension of the nature of infection.

ENTERTAINMENT FUND, INTERNATIONAL MEDICAL CONGRESS.

Dr. A. Y. P. Garnett, of Washington, offered the following:

"*Resolved*, That the members of this Association are requested, upon their return home, to adopt such measures as may seem to them best adapted to call the attention of their respective members of Congress to the necessity of making an appropriation to assist the medical profession in properly receiving and entertaining the International Medical Congress in 1887."

This was unanimously adopted.

Dr. John H. Rauch read his address as Chairman of the Section on State Medicine.

STATE MEDICINE.

The definitions of Dunglison, Parkes, and De Chaumont of State Medicine were quoted without full endorsement. It is coming to be recognized that a distinction between preventive medicine—the field of the sanitarian—and curative medicine—the field of the physician—is artificial and unnecessary; and

in this view Richardson, in a recent address, takes a similar position. He says, "It is not a science, it is not even an art separated necessarily or properly from so-called curative medicine. On the contrary, the study of prevention and cure proceed well together, and he is the most perfect sanitarian, and he is the most accomplished and useful physician, who knows most both of the prevention of disease and of the nature and treatment of disease,—he who knows, in fact, the before and the after of each striking phenomenon of disease that is presented for his observation." Quotations from the publications of the Illinois State Board of Health, illustrating its doctrines and doings, were then given.

State Medicine may, therefore, be now defined as the *connection of the State with that branch of science which relates to the prevention, cure, or alleviation of the diseases of the human body.* It is only logical to consider under this subject the regulation of medical practice and medical education. The regulation of medical practice comes under the police authority of the State.

A marked improvement has been noticed in the last decade in the quality of instruction and length of terms in medical colleges, and in a great reduction in the number of bogus schools and diploma-mills.

The following conclusions were submitted:

1. That the best interests of the public welfare demand the highest attainable standard of educational qualification, skill, and ability—as well as of professional and personal honor, integrity, and morality—among those engaged in the practice of medicine.

2. That it is the duty of the State to exercise the inherent plenary power and authority which it possesses for the protection and promotion of the public welfare, to secure such standard.

3. That uniform State laws, exacting of every one aspiring to practise medicine proof of personal fitness and professional competency, would prove the most potent agency in improving the standard of medical education and in enhancing the dignity and usefulness of the medical profession.

Specifically, he wished to suggest that the American Medical Association should put itself upon record at this session as recommending the extension of the period of study to four years and of the attendance upon lectures to three full terms, with ample hospital practice and clinical instruction as the requirements for graduation in medicine. That the Committee on State Medicine be instructed to frame a law for the regulation of the practice of medicine, which law when endorsed by the Association shall be the standard with which all existing legislation on this subject should be made to conform as speedily as practicable, and which shall be urged for adoption by those States where no such law now exists.

The second part of the address was devoted to advances and discoveries in preventive medicine.

Whether by the rehabilitation of the National Board of Health or by the creation of a new organization, it is the imperative duty of Congress to complete the health defences of the country. The work of the American Public Health Association was referred to approvingly.

After an inspection of the quarantine maintained upon the Atlantic and Gulf coasts from the St. Lawrence to the Rio Grande, he is more than ever convinced that Asiatic cholera as well as smallpox and yellow fever may be effectually excluded from the United States by an intelligent use of the agencies still at our command.

The necessity of central control by the United States Government of immigrants was earnestly considered, and the able address concluded with a consideration of the bacterian origin of infectious diseases, and a renewed advocacy of general resort to vaccination as a sanitary necessity.

On motion, the addresses were referred to the Sections for further consideration.

MISCELLANEOUS BUSINESS.

Dr. R. J. Dunglison's report, as Treasurer of the Association, was then read. An increased amount of receipts of annual dues he attributed to the influence of the Journal. Balance on hand at end of year, $378.29.

Dr. C. H. A. Kleinschmidt, the Librarian, reported the addition of 232 new titles to the Library, being twice as great as that of the preceding years.

Dr. A. L. Gihon offered the following amendment to the By-Laws:

"*Resolved*, That to the already existing Sections of this Association shall be added one to be known by the title of the 'Section on Dermatology and Syphilis.'"

This lies over until the next meeting.

He also offered a resolution, which was adopted, with regard to the recommendation contained in the President's address, that a committee be appointed to consider the subject of establishing branches of the Association, to report at the next meeting. The committee as subsequently appointed consists of Drs. Davis, Gihon, Toner, the President, ex-President, and four Vice-Presidents.

Friday, Fourth Day.—Session was opened by prayer by W. V. Tudor, D.D. Dr. Atwood, Chairman of the Committee of Arrangements, made a final report in reference to the river-excursion this afternoon.

General W. T. Sherman, being invited by the President to address the Association, made a few remarks congratulatory and courteous.

The Nominating Committee completed its work by nominating J. N. Quimby, of New Jersey, Chairman, and H. H. Kimble, of

Minnesota, Secretary, of the Section on Medical Jurisprudence.

The Committee on Publication and Trustees of the Journal presented their annual report through Dr. J. M. Toner.

The Journal had been issued regularly during the past year, the circulation having increased to 4271, including 3374 members of the Association. The financial condition was good. During the year a complete outfit of type had been purchased by the editor, and the Journal had been issued from its own office for the last year, thus effecting a saving of over seven hundred dollars per annum. At the solicitation of the Board of Trustees, Dr. N. S. Davis had consented to continue his valuable services as editor during the coming year.

The report was adopted with applause.

THE JUDICIAL COUNCIL REPORT.

As to the protest against the delegates from the Tri-States Medical Society, the Council stated that the Constitution of the American Medical Association could only recognize delegates from State and County Medical Societies, and representatives from a Tri-States Society could not be admitted. Protests were dismissed for want of sufficient evidence against the reception of delegates from the Davidson County Medical Society, Tennessee, Mississippi Valley Society, and Tennessee State Medical Society. With regard to the Philadelphia County Medical Society, "The Council, having reconsidered the question and heard evidence not forthcoming at the first hearing, came to the conclusion that, although the delegates held documents which usually entitle the holders to admission, the methods employed in their election were so irregular as to compel their rejection. The Council recommend the refunding of any dues paid by members, and refer the evidence back to the Philadelphia County Medical Society for adjudication."

The report was adopted.

Dr. Jackson, of Philadelphia, inquired as to the status of delegates from Philadelphia who had already registered.

The Chair decided that they had no status in the Association.

Dr. Roberts offered a resolution of investigation, whether or not the previous report of the Judicial Council had not been favorable to receiving the Philadelphia County Society delegates, and whether or not it had been presented the previous day to the Secretary of the Association in time to be read, and, if so, why it was not read.

The Chair declared Dr. Roberts out of order.

Dr. Eugene Smith, of Michigan, the Chairman of the Section, read a portion of his address on Ophthalmology, Otology, and Laryngology. Some of the principal points of interest in these several departments were rapidly sketched by the lecturer.

Dr. W. D. Haggard, of Tennessee, Chairman of the Section on Diseases of Children, read his address by title: "A Plea for the Better Recognition of the Importance of the Study of Diseases of Children."

Dr. John S. Marshall, Chairman of the Section on Dental and Oral Surgery, also by permission read his address by title. The preceding were all referred for publication.

The report on Necrology, as published from week to week in the Journal, was received and approved.

The Section on State Medicine reported the election of George H. Rohé, M.D., Baltimore, Maryland, Chairman, and W. W. Wyman, U.S.N., Secretary for the next meeting.

The Memorial of the Women's Christian Temperance Union, referred to the Section, was duly considered. The Section reaffirmed the resolutions passed by the Association at St. Paul and New Orleans, affirming that the use of alcohol had very deleterious effects on the human race, and recommending a course of study in hygiene with especial reference to this point in public schools, and welcoming any change in public sentiment in this direction. The drinking of alcohol is a cause of much physical and mental disease, and of a large proportion of the crime and pauperism of the country.

The resolutions offered by the Committee upon Cremation were considered by the Section, and the following adopted:

"*Resolved*, That a Committee of this Section be appointed to further consider the subject of cremation, with instructions to report their conclusions at the next meeting."

With regard to Dr. Rauch's suggestion, it was resolved that a committee be appointed to frame a law regulating the practice of medicine, to be presented at the next meeting for consideration.

The report of the Section on State Medicine was accepted.

On motion of Dr. Morris, it was resolved that the report of the Committee on Publication be received on the first day of the next session. Adopted.

Dr. John B. Roberts, of Pennsylvania, offered a resolution calling upon the President to state whether the report of the Judicial Council with reference to the protest against the Philadelphia County Medical Society was not presented on Wednesday, and if any effort was made to submit the report by the Secretary, and, if not, why not.

As the resolution contained reflections upon the action of the Judicial Council, it was, on motion of Dr. Octerlony,

"*Resolved*, That the resolution be laid upon the table, and that all reference to the Judicial Council be expunged from it."

Dr. Roberts then offered his resignation as Secretary of the Section on Surgery and Anatomy, on the ground that the Philadelphia County Medical Society was denied rep-

resentation. This was accepted, and the Chairman of the Section directed to fill the vacancy.

Dr. Jackson, one of the Philadelphia delegation, submitted a protest signed by the disqualified delegates:

"We, the undersigned, regularly-accredited delegates of the Philadelphia County Medical Society to the American Medical Association, earnestly protest against the action of the Judicial Council by which one of the largest county medical societies in affiliation with the Association—one which has never violated its Code of Ethics or its laws—has been denied representation in the Thirty-Seventh Annual Meeting of the Association."

This was ordered to be entered upon the minutes.

The President appointed a number of delegates to foreign societies. The following delegates to the British Medical Association were appointed: N. S. Davis, Illinois; W. T. Briggs, Tennessee; Wm. H. Pancoast, Pennsylvania; S. C. Gordon, Maine; J. V. Shoemaker, Pennsylvania; E. Cutter, New York; E. Smith, Michigan; W. W. Dawson, Ohio; D. McLean, Michigan; B. A. Watson, New Jersey; Wm. Brodie, Michigan; L. H. Montgomery, Illinois; H. O. Walker, Michigan; and J. C. Cattell, of Ontario, Canada. Delegate to Canada Association, Wm. Brodie, of Detroit, Michigan.

Dr. Keller offered an amendment to the by-laws restoring the former method of electing officers of Sections.

Dr. H. M. F. Gaston, of Mobile, offered a preamble referring to the alleged discoveries of Carmona and Freire of the means of preventing yellow fever by inoculation, with the following resolution:

"*Resolved*, That the American Medical Association recommends prompt action by Congress in the appointment of a commission of experts to proceed to Brazil to investigate the claims made concerning protection against yellow fever by inoculation."

On motion of Dr. N. S. Davis, a vote of thanks was cordially tendered the Committee of Arrangements, the citizens of St. Louis, the railroads, and all who had contributed to the enjoyment of the members and the success of the meeting. Adopted by a standing vote.

Drs. Davis, McPheeters, and Johnson were appointed a committee to escort the President, Dr. H. E. Gregory, to the chair, who made a brief speech thanking the Association for the honor conferred.

The meeting then adjourned *sine die*.

THE SANITARY CONFERENCE OF THE STATE BOARD OF HEALTH, held on the 12th, 13th, and 14th instant, was a grand success. The proceedings were interesting and valuable, and are worthy of preservation in permanent form.

NOTES OF HOSPITAL PRACTICE.

PENNSYLVANIA HOSPITAL.

SERVICE OF J. M. DA COSTA, M.D.

MALARIAL ANÆMIA TREATED WITH ARSENIC AND IRON.

GENTLEMEN,—The man before you, William G., an Italian sailor, 50 years of age, was admitted December 17, suffering with malaria and anæmia. It was learned that he had been sick for a year with dyspepsia, weakness, and pain in his chest, and that this had been accompanied by marked loss of flesh.

When admitted, he was very weak; his face was pallid, his heart was contracting without much force; there was an anæmic murmur at the left base, and a venous hum in the vessels of the neck. His pulse was feeble, rapid, and compressible, and his spleen was enlarged.

Under treatment with Fowler's solution (five minims three times a day) and the pyrophosphate of iron (ten grains thrice daily) he gradually improved. His blood at first was thin and poor; when examined shortly after admission it contained only a million and a quarter red blood-corpuscles to the cubic millimetre; at the present time it contains over four million to the millimetre by actual count made yesterday. With this increase in the red blood-cells there has been a corresponding improvement in the man's general appearance and strength.

Arsenic is one of the best nerve-tonics that we possess; it is also one of the most trustworthy restorative agents for those states in which the blood is profoundly altered. Especially is this the case when some poison underlies the morbid condition, as malaria, for instance, or any other poison which affects the blood-making function. It is also of some service in ordinary anæmia, by increasing the number of the red blood-corpuscles and improving the quality of the blood.

The salt of iron which was employed in this case is one which has been thus far very little used. Some years ago, while making some experiments for the purpose of finding some simple salt of iron for hypodermic purposes, we finally settled upon this salt, made by precipitating iron from a solution of the citrate by the addition of a solution of pyrophosphate of

sodium. We had found it the least irritating solution for hypodermic use, and upon pushing our observations further we also found that it was extremely well borne by the stomach in doses of five or ten grains. It is not unpleasant to the taste, and may be given in water with simple syrup or with a little elixir of orange. It does not constipate, like other chalybeate preparations, or at least it is less constipating. The salt I refer to is very much the same as the now officinal pyrophosphate.

ACUTE RHEUMATIC ENDOCARDITIS TREATED WITH ALKALIES.

Our next case is one which is still acutely ill, occupying bed 37, Men's Medical Ward. He is 23 years of age, a laborer, colored. This is his history. Six years ago he had an attack of acute rheumatism which confined him to bed for eight weeks: therefore it must have been a severe attack. He then recovered health, and remained well until two weeks before admission, when he was again the subject of a rheumatic inflammation, this time in his knees; subsequently his shoulders and wrists were affected.

When admitted, on the 28th of December, his temperature was 100°, pulse 96; his tongue coated, bowels constipated, and his knees were swollen and painful. The urine was scanty, extremely acid, with an excess of urates, and a specific gravity of 1030, but without albumen. No heart-murmurs could be detected, as I find specially noted in the report of his examination upon admission and several times since then.

The patient was placed at once upon decided doses of the salicylates. On the first day he took ninety grains of salicylate of sodium, and this was continued for four days, when it was noted that he had no fever and no pain. The salicylate of sodium was then stopped and quinine given. Though he was very much better as regards his joint-symptoms, he now began to complain of pain and uneasiness about the heart. On the 8th of January a soft systolic murmur was heard at the apex. Coupling this with the statement that the heart had been examined daily since his admission into the hospital, you observe that it was only on the twelfth day after entering the ward (or the fourth week of illness) that now for the first time a systolic mitral murmur was perceived. He was then taking twelve grains of quinine daily, which was at once stopped, as the salicylate had been a week before. He was then placed upon an ounce of bicarbonate of potassium daily, which he bore very well. Nevertheless the murmur in the heart persisted, although the man appeared otherwise quite well. He complained, however, of some pain and oppression, and the acute endocarditis developed affected more particularly the mitral valve.

On the 15th of January the murmur was still distinct, but cardiac uneasiness had disappeared. The potassium bicarbonate had been reduced on the 12th to half an ounce daily, which he has continued taking from that period to the present. The quinine was reduced to eight grains when the bicarbonate was commenced, and he is still taking this quantity.

His morning temperature is now 99°. You see on this sheet that from the time the endocarditis developed the temperature had many variations. It was 103°; even as late as the 20th of this month it was 103°: therefore it was a fever-temperature, irregular it is true, but continued, for only once during this time, on the 19th, did it drop to 99½°.

Proceeding to examine the patient, I find that he still has fever, but I can elicit no evidence of pain by pressure over the cardiac region, and shortness of breath no longer troubles him. His respirations are twenty-four in the minute, which, considering that he is in a state of agitation caused by having to come before you, cannot be called very much accelerated. He has an endocardial systolic murmur still evident at the apex, but it is not harsh. It is followed by a distinct second sound. The heart's impulse is marked, but there is no increased percussion-dulness in the cardiac region. Examining the back of the chest, I find the respiratory sounds are feeble, particularly over the left lung, and there is slight impairment of resonance at the left base corresponding with the area of feeble breathing. This is due to moderate congestion. He has no cough. His pulse is only 64 to the minute this morning, and it has some resistance to the touch. With reference to this pulse, I may as well tell you that throughout the disease his pulse has been rather slow; the records say 54, 66, 62, 64, 58, 65, 60, and 56. It is true that it jumped to 90 once; but it was only a temporary affair, for in

the evening it was down to 80, and on the next day it had returned to 60 per minute.

Therefore, notwithstanding the inflammation of the heart which here coexisted, the action of the organ has been slower than in health; and this appears more marked because the man has had no pericardial effusion or anything else to interfere with the movements of the heart.

Some remarks are suggested by this case, first, upon the cause of the disorder, and, secondly, upon the question of treatment.

First, as to the etiology of the case, I will point out that this man went through a severe attack of rheumatism years ago, but without presenting symptoms of heart-disorder, because he gave no evidence of it during the interval, and also because he was examined repeatedly after his admission and no murmur was detected. Subsequently a cardiac inflammatory process developed itself suddenly after the decline of the joint-symptoms, and when the patient was apparently rapidly improving. A cardiac lesion affecting such an important valve as the mitral announces itself by a decided murmur, as it does here. A lesion of this kind, so marked in degree, coming on late in the course of the disease, during convalescence from a second attack of articular rheumatism, in which the circulation does not appear to be affected by the heart-lesion, is certainly very unusual.

When we come to consider the therapeutics of the case, you see here an illustration of what to me is a growing conviction. When referring to the use of salicylates in this affection, I have called your attention to the absolute uselessness of salicylates in preventing cardiac complications. Here you have a strong case. Do not misunderstand me, however. I fully concur in the estimate of the value of salicylic acid or its salts in removing the symptoms of rheumatism, the pain and joint-affection; but I say that they are useless in preventing the occurrence of heart-lesions.

Let me say a few words about the alkaline treatment. When, in a case of rheumatism, you detect a commencing cardiac inflammation, *give alkalies*,—not only for their actual effect, but also to prevent the occurrence of persistent heart-complications. Give them in full doses. The object is to saturate rapidly the system and defibrinate the blood, and, if possible, prevent deposits upon the valves. We also aim to keep up the secretions, and therefore give the alkali in combination with neutral mixture, so as to keep up the action of the kidneys. Alkalies, by altering the crasis of the blood and acting as depuratives, are the most valuable agents we possess in the treatment of inflammations complicating acute rheumatism, and especially for the cardiac complications.

Will the patient recover without permanent damage to his heart? It is too early to decide this important question; but the murmur is so recent that I think it will disappear, or at least does so to a large extent. If any lesion remain, it will only be a slight roughening of the valve.

In considering the question of further treatment, we will now give ten grains of iodide of potassium three times a day, while we diminish the alkali still more,—to two drachms of bicarbonate of potassium three times a day. He shall be well nourished, but without meat or much nitrogenized food. Starchy food, bread and vegetables, and a little milk, shall constitute, in the main, his dietary. Quinine shall be continued, eight grains daily. You may ask, Why give quinine at all? Simply, my reply would be, as a general tonic and with a view to preventing a relapse.

ERYSIPELAS TREATED WITH PILOCARPINE: RAPID DEFERVESCENCE AND DECLINE OF ALL THE SYMPTOMS.

In concluding to-day's clinic I will show you two cases of facial erysipelas. Both are men, and I bring both of them before you on account of their treatment, and not to discuss their symptoms.

The first case is that of a laborer, occupying bed 39. He had an attack of erysipelas, commencing ten days before his admission. Ten years ago he says that he had a similar attack in his face. The present inflammation began in his left knee and leg, following a sprain. Three days after the injury was received, the erysipelas appeared in the knee, and the next day his face was also attacked.

The man states that he is of temperate habits and usually healthy. When admitted, he presented a well-developed case of erysipelas: the knee and leg of the left side were enormously swollen, and the inflammation extended from the ankle-joint

to half-way up the thigh; at the same time his face was disfigured by discoloration and swelling; the eyes were not entirely closed, but the skin was of a vivid red hue and shining; the hairy scalp was not invaded, although the inflammation extended to the forehead; his temperature varied during the first few days from 100° to 102°; there was a trace of albumen in the urine at that time; pulse about 100, and of good volume; his bowels were constipated, his tongue coated, and he had no appetite.

Now, gentlemen, this man had been under treatment outside, but without checking the course of the disease. As to exactly what this treatment was we are unable to get any information. Finding him a very ill man, with this spreading erysipelas, we gave him pilocarpine, a sixth of a grain hypodermically every two hours, and afterwards an eighth of a grain. He was also purged with a mercurial pill. The pilocarpine, even with this repetition, did not produce any sweating after several doses had been given, and we therefore supplemented its action by twenty drops of the fluid extract of jaborandi given every second hour, which soon caused free sweating.

In about twelve hours after instituting this treatment, the erysipelatous inflammation was checked and began to decline. The temperature also went down from 102° to normal. Since that time the man has made rapid improvement, and is now convalescent. This morning, barring a little sweating of the forehead and some puffiness and wrinkling about the eyelids, you would not believe from his appearance that he had had erysipelas at all. From the leg also the swelling has disappeared, but there is free desquamation, and the skin underneath is still slightly red, though not swollen. There is some itching of the skin, of the leg particularly, but no pain. This man, for all practical purposes, is well. He is still taking twenty-drop doses of jaborandi three times a day, which acts as a diuretic, keeping up the flow of urine to two and a half to three pints a day; there is no longer albumen in his urine; there has been no marked effect from the pilocarpine upon the salivary glands, and no disturbance of the cardiac action; there is no murmur, anæmic or organic.

I have shown you this man as a marked illustration of the value of pilocarpine and jaborandi in the treatment of erysipelas. Now I will show you a second case, similar in character.

This man hurt his nose by a fall ten days before admission, which was also on the 18th, and five or six days later he had an attack of erysipelatous inflammation upon the right side of his face. This also showed a spreading tendency, and soon involved the right ear. On the fifth day of the disease he entered the hospital, and his entire face was red, swollen, and shining. He was put upon exactly the same treatment as the preceding case. One-sixth of a grain of pilocarpine, followed by twenty drops of fluid extract of jaborandi, was given every two hours. The hypodermic injection was not repeated, because it had acted freely upon the skin. It did not increase the flow of urine, as in the other case, and did not increase the salivary secretion. The temperature upon admission was 103½° in the afternoon, but after the hypodermic injection it declined almost immediately to 100°, and later in the evening it was 99½°. The next day it attained 101°, but it was not again to a fever-temperature, and soon fell to normal.

The erysipelatous process spread to the left ear upon the day following admission, but there has been no outbreak since, and the original inflammation rapidly subsided. The disorder was quickly influenced by the remedy. This patient had no quinine and no iron, simply the jaborandi. This treatment has been growing upon me for some years, and I can say that I believe it to be of value. You know that the usual treatment is by iron and quinine, and thus far this man has had neither. Certainly these agents do exert some influence upon the disease and relieve the inflammation. We, however, have had better results from the jaborandi than from the preceding mode of treatment. My experience, of course, is more with what physicians call erysipelas, and in our first case, where it seemed to follow a sprain, there may be a question whether or not it was the surgical form. I will confine myself, however, to my own observation, and speak of erysipelas as it comes under the eye of the physician, and I will say that I know nothing that has such an effect upon the course of erysipelas as jaborandi and its active principle, pilocarpine. They have been in

my hands of special service in cases in which the heart is not feeble nor the vitality depressed; and in those in which there is an acute beginning with high temperature, and with a tendency to rapid spreading. The demonstrated value of the pilocarpine-treatment in this class of cases renders it probable that it may also be of service in surgical erysipelas, and I have recommended it to our surgeons for trial.

TRANSLATIONS.

Gavage in the Treatment of Consumption.—Débove and other French writers have during the last few years repeatedly commended superalimentation in the treatment of phthisical patients. In spite of the absence of appetite, the patients were obliged to take, by means of the œsophageal tube, large quantities of a mixture of milk, eggs, and so-called meat-powder (meat cut up small, dried over a fire, and powdered in a mortar), with the occasional addition of peptones and cod-liver oil. Dr. Peiper (*Deutsches Archiv f. Klin. Med.*, xxxvii.) has repeatedly tried the method in Mosler's clinic. In two cases the œsophageal sound was discontinued at the solicitation of the patients, however, and they were allowed to take their food in a natural manner. At the outset, half a litre (one pint) of lukewarm milk or bouillon was given with twenty-five grains of meat-powder, several eggs were added, and this quantity given twice daily; subsequently the milk and meat-powder were greatly increased, and given four times a day. With this the patients continued their regular diet, which was chiefly vegetable, with usually one bottle of wine daily; cod-liver oil and stomachics were given when required. Fourteen patients were treated in this way, with the following result: in two the condition became worse during the treatment; in the remainder, on the contrary, after a short time a marked improvement in their general condition was observed; strength and bodily weight increased, they were able to leave their beds, the appetite improved, attendant diarrhœa was checked, cough and vomiting were much reduced. Bacilli were not detected in the majority of the cases, however. The excretion of urea was greatly increased, sweating was less, and in two the hectic fever was favorably influenced.—*Centralblatt für die Med. Wissenschaft*, April 17.

Rapid Dilatation of the Uterine Cavity.—M. Vulliet, of Geneva, at the meeting of the Academy of Medicine (Paris, April 6) demonstrated his new method of dilatation of the uterine canal and explained its application to the treatment of uterine affections. He places his patient in the genu-pectoral position, and after using a bougie or dilator he introduces three or four small tampons, which have been previously dipped in a ten-per-cent. solution of iodoform and dried; to each of which a double thread is fastened to facilitate removal, which should take place in twenty-four to forty-eight hours. The cavity is then washed out with an antiseptic solution, and new tampons inserted, and in this way continuing until maximum dilatation is reached, being careful not to leave the uterus empty if a good result is looked for. Laminaria tents, which have been also disinfected, may be employed if more rapid dilatation is desired at the end of three or four days. When dilatation is complete, the interior of the uterus is visible throughout its entire extent, and it is an easy matter to apply the actual cautery, or any other local treatment, in cases of cancer, polypi, or endometritis. With antiseptic precautions this procedure is without danger.

Physiological Action of Hypnone.—MM. Quinquaud and Laborde, having studied the action of hypnone, which has recently been so highly lauded as a sedative and narcotic in fever, reported at the last meeting of the Société de Biologie that it has asphyxiating effects. This confirms the results of M. Laborde's previous experiments. Therefore hypnone is not, properly speaking, a hypnotic remedy, but is much more of an asphyxiating agent.

Actinomycosis in Man.—Before the Congress of the German Society for Surgery, held in April, Dr. Rotter, of Berlin, reported five cases, coming under his own observation, of actinomycosis in man.—*Deutsche Med. Zeitung*, April 19.

For Eczema of the Hairy Scalp.—

℞ Glycerini, 100 gr.;
Acid. salicylic., 5 gr.;
Spiritus Mindereri, 25 gr.—M.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, MAY 15, 1886.

EDITORIAL.

ANNUAL MEETINGS OF MEDICAL AND SURGICAL ASSOCIATIONS.

THE meeting of the American Medical Association held in St. Louis, Missouri, last week, as had been predicted in these columns, was successful and harmonious to an unusual degree, in spite of the newspaper efforts to create a disagreement among doctors. A calm reconsideration of the action of the Judicial Council in regard to the protest against the reception of delegates from the Philadelphia County Medical Society will satisfy any disinterested observer that the Council acted consistently and wisely in referring the action of the County Society to the State Society, with the papers. It was unfortunate that the Council had in the first place, on the day previous, decided the case hastily, before hearing all the evidence; but their right to take their report back again, before the Association took any action upon it, cannot be brought into question. The vote upon sustaining the chair in a question growing out of this report was unanimous, thus indicating the attitude of the members of the Association against those who disturbed its peace last year.

At this meeting two new Sections were proposed to be added at the next meeting, —one on Medical Jurisprudence, and one on Dermatology and Syphilis,—which will tend to increase the interest and value of the proceedings. A good suggestion was made by Dr. Eugene Smith, Chairman of the Section of Ophthalmology, etc., in his address, which the Committee of Arrangements might with advantage adopt at the next meeting. He proposed that papers upon special subjects should be read before the general session, so that the whole Association could hear them: a discussion upon such subjects as ophthalmia neonatorum he thought might be useful.

Although something was gained by omitting the roll-call, yet several Chairmen of Sections were obliged to read their addresses only in abstract, on account of the short time left them. In the Sections the pressure was worse, and many papers were read only by title. An arrangement by which writers of communications would be obliged to send their completed essay thirty days in advance to the Secretary and Chairman of the Section to which it belonged, would enable the officers to act as censors, selecting the better and rejecting the poorer papers, and thus spare the members much loss of time.

The arrangements for registration were well planned, and thus confusion was avoided,—the members not being required to wait for their invitations, which were delivered subsequently from the temporary post-office established for the convenience of the Association in the same building. Much credit is due the Committee of Arrangements for their forethought and polite attention. During the sessions the *Weekly Medical Review* of St. Louis issued a daily edition, which was distributed to the members, containing accounts of the proceedings from day to day.

The dinner given by the Medical Press and Library Association to the visiting medical editors was the best entertainment that has yet been tendered to this Association, and was largely attended.

From conversations held with different persons during the meetings of the Association, the impression was obtained that there are abundant indications of success for the International Medical Congress next year, especially if a liberal appropriation is made by the national government towards entertaining our foreign guests.

The American Surgical Association, the

report of which is also contained in this issue, had a successful though not very exciting annual meeting in Washington, D.C. The papers were on practical subjects and the discussions valuable. This Society has done good work, and issues a handsome volume of Transactions.

MEDDLESOME MEDICAL LEGISLATION.

THE King of Servia, according to the journals, has issued the following: "Whereas it is irrefutably proved by science that the so-called antiseptic treatment of wounds yields more beneficial results than all other methods, we are pleased to order that henceforward the said antiseptic plan of treatment be solely employed in all the hospitals of our kingdom, and that corrosive sublimate and iodoform be used until our further disposition."

In a similar spirit was the prosecution and conviction of a physician in Germany last year for malpractice in not treating a patient by the antiseptic method. In our own country, four States—Georgia, Florida, Kentucky, and Virginia—have recently passed an act requiring morphine and its salts to be put up with scarlet labels and wrappers. If this rule be applicable to prescriptions (and it is manifestly designed to prevent mistakes by druggists in dispensing), it will greatly interfere with freedom in prescribing and hamper the physician in his duties, unless he should constantly carry a supply with him of morphine sufficient for his wants, which will tend to defeat the object of the law. In this form it is simply an additional example of mischievous medical legislation.

In order to prevent such errors, the Legislature needs to take counsel with good medical advisers. Medical legislation is a two-edged sword, and may injure medical interests, if not wisely planned, quite as much as it may protect if properly guided. We hope that our State Board of Health will keep a good lookout for meddlesome medical legislation in this State, and oppose it at the beginning.

LEADING ARTICLES.

THE MUSCULAR DISEASE.

THE painstaking investigations of neuropathologists in the last few years have given us, if not exactly a new disease, at least a new pathology which has brought into unity and harmony a large number of apparently unrelated phenomena.

The Muscular Disease is the name which may be given to the results of their work, and it includes all those forms of progressive muscular atrophy in which the muscle itself is alone involved.

The Muscular Disease does not include the ordinary or spinal form of progressive muscular atrophy of the so-called Duchenne-Aran type, but does include pseudo-muscular hypertrophy, the juvenile atrophy of Erb, the infantile progressive muscular atrophy of Duchenne, and other types. It goes without saying, therefore, that neuropathology is much simplified by the discovery of the true nature of these atrophies.

Muscular atrophy from various causes is extremely common. The most frequent and ordinary types are those produced by injuries and rheumatic or joint troubles, and by acute organic disease of the spinal cord and nerves.

Next in frequency is the atrophy which occurs as the result of a chronic disease of the spinal cord; while last and probably rarest are the progressive muscular atrophies due to a primary degeneration of the muscle itself. It is through the labors of Erb, Schultz, Gowers, Möbius, Leyden, Eichorst, Dejérine, Landouzy, and others, that this last class of atrophies in this various form has been shown to have an identical pathological basis.

There are now, therefore, clinically and anatomically, two broadly-distinguished types of progressive muscular atrophy,—viz., that due primarily to spinal, and that due primarily to muscular disease.

I. The spinal progressive muscular atrophies include not only the classical Duchenne-Aran type such as is ordinarily met with, but also glosso-labio-laryngeal

paralysis and progressive ophthalmoplegia externa. Amyotrophic lateral sclerosis is the same disease plus a sclerosis of the lateral columns of the cord.

In all these types the muscular atrophy and paresis are due to a degeneration and atrophy of the nutritive and motor cells at different levels of the spinal cord or medulla.

II. The primary muscular atrophy or muscular disease has as its anatomical basis a progressive degenerative atrophy of certain groups of muscles, accompanied sometimes by pseudo-hypertrophy.

Clinicians have divided the *muscular disease* into a large number of clinical forms, their divisions being based upon the groups of muscles attacked, the age of the patient when attacked, the presence of a pseudo-hypertrophy, and the *absence of any atrophy*, the muscular defect being then shown simply by weakness.

These types have received various names from the writers who first described them.*

The relations of these atrophies are best shown in the following table.

The primary progressive muscular atrophies of spinal origin.	Progressive muscular atrophy (Duchenne-Aran). Bulbar paralysis. Ophthalmoplegia externa. Irregular types,—*e. g.*, scapulo-humeral form of Vulpian.
The primary progressive atrophies of muscular origin (the Muscular Disease).	1. Pseudo-hypertrophic paralysis. 2. The family atrophies: (*a*) Juvenile atrophy of Erb. (*b*) Infantile progressive muscular atrophy of Duchenne. (*c*) The non-atrophic form of Charcot. (*d*) Other types classified (by Eichorst, Zimmerlin, etc.) according to the muscular groups first or most attacked.

* There are certain local muscular atrophies produced by over-use of groups of muscles. These are not progressive, and do not come under the term Muscular Disease.

The various types of the primary myopathic atrophies, as indicated above, have certain common characters clinically and anatomically. All of them are hereditary or occur in families.

There is generally no neuropathic history, and there are no marked nervous disturbances. The muscles are attacked in the order of their anatomical relations, and not in accordance with their physiological function or the nerve-distribution.

The disease generally begins in infancy or youth, but may attack at any age.

The degenerating muscles show no fibrillary contractions (as in the spinal form of atrophy).

There are no pure degenerative electrical reactions in muscle or nerve except in the very latest stages. Then we may find modal and even serial changes. The electrical formulæ are as follows:

		Galvanism.	Faradism.
Early in the disease.	Nerve.	Normal.	Normal.
	Muscle.	Normal.	Normal.
Late in the disease.	Nerve.	Normal.	Normal.
	Muscle.	CaCC = or < AnCC CaCTe < AnCTe AnOC = O CaOC = O	Normal.

The reactions are the same, therefore, as in the spinal form of progressive muscular atrophy, only in this latter case degenerative reactions appear sooner.

As in the spinal form, the muscle contracts and retains some power as long as it has any healthy fibres left.

There are no vaso-motor or secretory disturbances as in the spinal form. The disease progresses very slowly, sometimes stopping in its progress, and it may last for twenty or thirty years. It begins insidiously, attacking one-half the face or the shoulder and arm muscles, or lumbar and leg muscles.

The great variation in the development of the atrophy has led to much confusion and to an unnecessary attempt to differentiate "types." The following classification is given in order to illustrate this, and also to show the clinical groups and the symptomatology of the disease. There is no real necessity, however, for such numerous and finely-drawn distinctions.

Classified according to the age at which the disease begins, we have—

I. The types that begin exclusively in infancy or before the age of twenty-one. These are: (*a*) Pseudo-membranous hypertrophy; (*b*) Erb's juvenile form of progressive muscular atrophy, and certain allied and doubtless identical types described by Leyden and Möbius.

II. Beginning at any age. This includes the so-called infantile progressive muscular atrophy, which sometimes sets in after twenty-one, and other types of family atrophies.

It is very evident that age is no criterion upon which to classify the types of this disease. It is a fact that most cases begin in infancy or youth, and that is about all that is brought out by such attempts.

A second classification is based upon the group of muscles first attacked. Thus, we have—

1. Types beginning in the lower limbs: (*a*) Pseudo-hypertrophy; (*b*) Hereditary progressive muscular atrophy of Leyden, Möbius, Eichorst, Charcot.

2. Beginning in the shoulders and arm-muscles: Erb's juvenile form of progressive muscular atrophy and an allied form described by Zimmerlin and by Landouzy and Dejérine.

3. Beginning in the face or shoulders and arm: The infantile progressive muscular atrophy of Duchenne, which has been lately shown to be a primary myopathy by Landouzy and Dejérine.

Finally, we have a classification based upon the presence or absence of true or false hypertrophy, and we have a type described by Charcot, in which he claims that, although there is no atrophy or hypertrophy, yet it is the Muscular Disease because the muscles develop a progressive *weakness*.

It seems quite thoroughly established that, aside from the well-marked disease known as pseudo-hypertrophic paralysis, there may be some slight hypertrophy (true or false) in other types of these myopathies, more especially those occurring in children.

The cause of the myopathic atrophies is not known. They occur generally in families, and are the evidence of a degenerative taint. So that, doubtless, if we could learn the whole history, we should find some cause of the family vice.

Cases are apparently rare in this country, but it may be because they are not recognized; and it is hoped that this article may stimulate physicians to be more on the alert.

Very little can be done in the way of treatment; but electricity, massage, roborant measures, and alterative drugs are indicated. The disease sometimes ceases to progress for long periods of time.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

SOME New Remedies and Therapeutic Suggestions. — Professor Hayem said last year that modern therapeutics might be defined as being a knowledge of indications and the art of fulfilling them. This year, in opening the spring course of lectures, he is not at all certain of being possessed of better knowledge as to the specific treatment of disease, as he says that the only specifics he is certain of are mercury, iodide of potassium, and quinine. At the same time he thinks that an important new set of indications is to be found in *disinfecting medication*, derived from the modern study of the micro-organisms. He defines the difference between simple medication and medical treatment by an example. Suppose we are called to a case of facial neuralgia, and after a careful clinical examination of the case we find that syphilis exists. Then we proceed to the treatment of that disease by specific remedies. But if there be nothing at all found to guide us, then we use medication for symptoms. Speaking of the treatment of hydrophobia by Pasteur's system, he explains that it is a preventive one, which attacks a process of incubation that is going on in the system and prevents its complete development, and there are hopes that some such system modified will yet give us the clue to the proper treatment of phthisis and other diseases.

Dr. Hayem, while on modern therapeutics, spoke of how, only a very few years ago, the professors of medicine took up, first of all, fever and inflammation as the most important of all the morbid processes; but we can now change this, because we know that *infection is the dominating element*, and fever and inflammation are only secondary symptoms. The idea of infection is not altogether new, as the ancients spoke of it; but its study is quite modern. Trousseau in his lectures hinted at it; but it was Davaine that first showed, in his study of the malignant pustule called "charbon," that the fundamental character of infection consists in some form of micro-organism. These ubiquitous microbes exist at all times and in all places. The present German idea of their development is that they are like tapeworm and similar parasites: that is, that they are all hatched

from eggs or some previous deposits of germinating matter. Certainly it is more than probable that the fully-developed specific microbe does not "wait around" for years for a favorable opportunity to attack us; but it is most likely passing through some form of evolution, being developed from one form of parasite to another. The important fact derived from the study of infection is that some sort of medication based on internal disinfection must be established; and Professor Hayem proposes to develop the latest efforts made in this direction in a series of lectures, which we will communicate in due course.

One of the newest attempts to prepare such remedies is *salol*, or *salycylate of phenol*. This is a new antiseptic that has been discovered by Professor Von Nencki, of Berne, Switzerland. It seems destined to take the place of salicylate of soda, first of all in the treatment of rheumatism, and it may also succeed many of the other antiseptics. The unpleasant taste of the sodium salicylate is known in all hospitals, and it so frequently produces nausea followed by a fainting-fit that for many patients it soon becomes intolerable. The new body, salol, is a white body, slightly greasy to the touch, and having a slight aromatic odor, but no taste. It is almost insoluble in water, but soluble in alcohol.

M. Von Nencki first tried it on animals, and found that all the salol given with the food was found in the urine in the form of urate of salicyl: so that in the organism there was only a simple decomposition without any modification of the composing parts of the salol. Following up his experiments, M. Von Nencki found that it was the pancreatic juice that caused this transformation,—so that it was in the duodenum, and not in the stomach itself, that the decomposition took place; from which fact he explained the absence of nausea, etc., in the administration of the drug. From six to eight grammes of it is now given per day. The urine of the patients becomes almost black, just as though they had taken carbolic acid itself; but there are no bad consequences found from this. Given in all the different rheumatismal affections, it has met with a greater success than the salicylate of soda, reducing all fever much quicker than the soda. It is also an antipyretic, and it has been tried in phthisis with a result of diminishing the temperature four degrees Centigrade (from 40° to 36°). It is advised to commence in these cases with small doses (0.50 centigramme). Salol would be indicated also in diabetes, as phenol is given. Again, it is given as a local antiseptic in all intestinal catarrhs, and, as Levachoff has demonstrated that salicyl dilutes bile, it may be given in typhoid fever to disinfect the ulcerations, and used also in cholera, and against all intestinal parasites. One of its important uses will most likely be in catarrhs of the bladder. Urine in which it was placed kept without decomposition for over six weeks, and in all cases the patient's urine became completely aseptic. Again, salol is almost insoluble, and its use as an antiseptic in place of iodoform has already given such results that we may be able to get rid of the last-named disagreeable substance and the dangerous corrosive sublimate. If salol does not kill the bacilli, it certainly prevents their development: so it is suitable more than any other known substance to powder wounds with.

While on the subject of therapeutics and materia medica, something might be said about Professor Planchon's studies on the barks of *Remijia*. Most of the modern botanists had given up all ideas of finding quinine in any of the plants nearly related to the cinchona family; but in 1871 Hesse analyzed a bark having a peculiar appearance and found quinine in it. Fluckiger, who saw the bark, thought it was not a true cinchona, but some sort of plant of the same family. Later, in 1881, M. Arnaud announced the discovery of a new bark that contained a new alkaloid, cinchonamine. Lately M. Triana, Consul-General of New Granada, got a supply of these different barks, and Professor Planchon has been able to class them as follows: *Remijia pedunculata*, the one that produces the bark that has been called "cinchona cuprea," and *Remijia Purdieana*, which gives the cinchonamine of M. Arnaud. There are some important results to arise from the proper classification of these barks. First, it is of great moment to have all the sources of our most used and perhaps most important medicine, quinine; secondly, it is thought possible to cultivate these barks in Europe, and, if so, it certainly would be possible to do so in the United States. Since the remijias are much less impressionable to change of climate than the cinchonas, such climates as Florida ought to raise them. The greatest advantage in a medical point of view is that these plants contain important principles that are destined to great use in medicine. It is well known that quinine is not the only alkaloid found in the cinchonas; most of them contain cinchonidine. And so great has this source of impurity been that, up to the last edition of the French Codex, it was allowed that quinine with only a certain proportion of cinchonidine was sufficiently pure. As in the last Codex a reaction was given which permits chemists to detect it, the quinine is now much more free of it.

The Remijia pedunculata does not contain any of the cinchonidine, and contains from nine to eighteen per cent. of pure quinine. The result of this is that for the last few years the market is full of this bark and the price of quinine is very much lower: so that this new bark has given us a plentiful supply. The other bark of the same class does not contain any quinine: it is the Remijia Pur-

dieana; but it contains the new alkaloid called here cinchonamine. This principle is a very active one; but it is too soon yet to declare what it can do, though wonderful results are expected from it. Dr. Laborde is trying it in Professor Béclard's laboratory. A dose of twenty-five centigrammes will kill a guinea-pig. Other effects have been produced, and it is thought that a remarkable new therapeutic agent has been found.

On the Normal Poisons that exist in the Organism, and on the Toxic Properties of Urine.—Professor Bouchard has for the past two years been employing his pathological laboratory at the Faculty of Medicine here in the study of the above question, and from time to time in his lectures and in his communications to the Académie des Sciences he gave the results. In a few days quite a large volume will be published on these studies and their applications to renal diseases. The chemical principles that constitute the human organism can all become very dangerous to it the moment they exist in abnormal proportions. For instance, oxygen, common salt, water, will kill if introduced in excess into our bodies. Chloride of potassium is mortal at a dose of eighteen centigrammes per kilogramme. Man, as well as the other animals, is certainly and constantly traversed by poisons that are introduced or formed in his body; but in the normal state he is protected against this intoxication by three principal agents: first, intra-organic oxidation, which will destroy certain poisons; second, the liver, which stops and destroys others; thirdly, the emunctories, which carry off the larger part of the danger. It is possible to appreciate the degree of toxity of the poisons that pass through the body by determining the degree of toxity of the substances that are expelled from each emunctory: that is to say, by calculating what mass of living matter can be killed by the substances that are eliminated in a certain time from each organ of excretion.

Dr. Bouchard calls *toxie* the unit of quantity that would kill a kilogramme of living matter, and adds to it all the different functions of excretion, calling the urine-unit *urotoxie*, the bile unit *choletoxie*, the skin-unit *dermotoxie*, etc. He first of all takes up the toxity of the urine, which has always been supposed, but has only really been studied experimentally this last five years, first by Feltz and Ritter in 1881, and since by Professor Bouchard, who last year gave the results of his experiments in his lectures. He found that an injection of ten, twelve, or fifteen cubic centimetres of urine in rabbits caused a contraction of the pupil that soon became punctiform; shortly afterwards an acceleration of the respiratory movements was noticed, with a diminution of their amplitude, then indecision in movements, sleepiness, and a considerable augmentation of the urinary function, with frequent emissions of urine; the temperature fell, and death came without any convulsions. Experiments of control were made by the injection of water only, and in fact it was found, after a long series of trials, that the quantity of urine that would kill a kilogramme of living matter was variable; but an average urotoxie was represented by forty-five cubic centigrammes of normal urine in adult man; and urine does not kill by any mechanical action, but only by the poisonous matters that it holds in solution. The determination of the urotoxie has allowed Professor Bouchard to determine the coefficient urotoxie of man: that is to say, the quantity of urotoxies that the unity of weight would fabricate or manufacture in the unity of time. A man in good health will eliminate in twenty-four hours for each kilogramme of his weight a quantity of urinary poison that is capable of killing four hundred and sixty-four grammes of living matter. So that a man takes two days and four hours to manufacture in himself the amount of poison in his urine which, if not eliminated, would be capable of killing him.

Now, in regard to the variations of this toxic action during sleeping and waking hours, Dr. Bouchard gives some interesting details. Man eliminates during sleep much less urine than when awake, and, curious to say, it is at the same time denser and less toxic than that eliminated in the daytime. At the end of the period of wakefulness—that is, the moment we are going to sleep—the urinary toxity is at a minimum. From this moment it augments in poisonous qualities during sixteen hours,—first during sleep, then during the first part of our waking hours. At the moment of waking up it is five times more toxic than during sleep; eight hours after waking it is at its maximum. From this moment it commences to run down in strength, and in another eight hours it returns to the minimum.

As to the real toxity of the urine eliminated in sleep and that during waking hours, the urine presents also a difference in quality. That of sleep is always sure to have a convulsive action on animals; that eliminated in the day is not so, but is very narcotic. The difference is so great that one must operate with one or the other to see the effects. These trials will, it is hoped, have a practical purpose, as they will lead to a proper therapeutical treatment of urinary diseases.

The Direct Contagion of Typhoid Fever.—Dr. Joffroy having stated at a meeting of the Société Médicale des Hôpitaux that he did not believe that typhoid fever was contagious, Dr. Gérin-Rose said he was surprised to hear Dr. Joffroy say so, as well as others. For his part, he had a list of some three hundred and seventy-two cases, of which two hundred and four had been taken from Tenon Hospital,

and the rest from Bichat and the Lariboisière Hospital, and he had seen at least thirteen cases of direct contagion, among them one of the infirmiers, who had died of the disease. He therefore was of the opinion that it was at least contagious for those who were compelled to be in the same building and had to sleep in the wards with the fever-patients, and as long as the city did not send the senile and chronic patients to other hospitals he felt sure that it would be continued as a contagious disease.

M. Joffroy, replying, said that the facts cited by Dr. Gérin-Rose could not be invoked in favor of a theory of contagion, because even when typhoid fever was epidemic here there were very few cases in the hospitals themselves. He did not deny that it might be contagious to a very slight extent, but it was at least very much less so than diphtheria or puerperal fever.

Paraphimosis.—An interesting clinic was given on this subject at the Hôpital Laennec, by Professor Nicaise, which is worthy of attention. Dr. Nicaise said, "You have just seen in No. 17 bed a young man who is to-day cured of a paraphimosis, and I will speak of it, as there are some points that you should know to understand its mode of production, its consequences, and its spontaneous cure, with the treatment that must be employed.

"Our patient had a congenital phimosis, and, having retracted the prepuce, found that he could not replace it. When brought here we saw this state of affairs. There was an ulceration on the dorsal face of the penis whose borders were formed by the preputial mucous membrane on one side and the skin of the prepuce on the other, and its centre was constituted by the submucous tissue. The glans itself was swollen, and behind it was a ring or belt of tissue which was thicker below than above, and ulcerated behind in a deep furrow or sulcus. This furrow you remarked was not circular, but oblique from below forward; it was also more profound above than below: this is what we saw four days after the retraction.

"I made a slight effort at reduction; but the pain was severe, and I feared producing a tear in the inflamed and ulcerated tissue. I at once introduced a pair of scissors and made a section. This incision at once became enlarged of itself, and I could have reduced it at once, but I always prefer to allow it to reduce itself, and the next morning most of the œdema had diminished, taxis was spontaneous, and to-day the patient is cured. The treatment of these troubles varies according to whether ulceration exists or not. As long as there is no ulceration, try taxis. To succeed there are a number of ways. I prefer M. Le Fort's, who places the tips of his fingers behind the furrow and at the same time uses the thumb to press in the gland. Another process is that of M. Mauriac: he pulls back the skin, and, putting a finger under the prepuce, attempts to pull it forward over the finger, or a hair-pin with the bent end forward may be put under the prepuce and an attempt made to draw the constriction over it. Finally, there is the mode called total compression: this is to use a small Esmarch's elastic band, or even a linen band, and make compression from before backward, which will take all the blood out of the organ and often render the reduction easy.

"When there is ulceration, it is preferable to proceed at once as in this case, or make a simple *débridement* by cutting across where the constriction is the thickest. One single incision is all that is needed, and it is preferable not to attempt any reduction at once, but to allow it to operate spontaneously. If desired, circumcision can be practised; but I do not see any need of it. I will close by recommending you in these little operations, as well as in the more important ones, to insist on strict antiseptic treatment. The solution of carbolic acid used should be very weak, and, the operation once made, apply a simple dressing of iodoform. No fatty substances are needed in attempting the reduction, as they do more harm than good."

The death of Professor Bouchardat, after a long and painful illness, is announced. He was born in 1806, and was Professor of Hygiene at the Paris School up to a year ago, when he was retired on account of age. He was Dean of the Academy of Medicine since 1850.

We have your townsman Dr. E. O. Shakespeare in Paris for the last week or so, taking an interest in M. Pasteur's work and the other interesting pathological studies to be seen in Paris. There is a renewal of the epidemic of cholera in Brittany, and it is quite possible that the doctor can see some of it before he leaves France. THOMAS LINN, M.D.

PARIS, April 19, 1886.

PROCEEDINGS OF SOCIETIES.

AMERICAN SURGICAL ASSOCIATION.

THE Seventh Annual Session of the American Surgical Association was held in the Army Medical Museum, Washington, D.C., April 28 to May 1, inclusive.

The meeting was called to order at 11 A.M., Wednesday, April 28, by the President, Moses Gunn, M.D., of Chicago.

After the calling of the roll by the Secretary, the President delivered his annual address, an abstract of which follows.

ANNUAL ADDRESS.

Fellows of the American Surgical Association,—Custom, if not organic law, requires the

President to open the proceedings at your annual meetings with a more or less formal address. My immediate predecessor, in his address one year since, suggested that either a résumé of the progress of surgery for the previous year, or some special scientific subject, should constitute the subject-matter of the President's address. I propose to comply with the spirit of this suggestion, and shall indulge in a few thoughts on certain points in the physiology and surgery of motor, sensory, and moto-sensory or compound nerves.

Previous to the investigations of Magendie and Bell, no clearly-defined effort had been made to differentiate the motor and sensory nerves. It remained for these investigators to establish clearly the fact of the motor qualities of the anterior roots and the sensory qualities of the posterior roots. With this also came the idea that this difference was intrinsic, and due to peculiarities in the anatomical and physiological organization of nerve-fibres. This appears to have been the idea generally entertained until very recently. Let us inquire, Is this a fact, or is the difference to be found in extrinsic conditions,—*i.e.*, the anatomical organization at each end of the nerve,—the nerve trunk being simply a conductor of a form of force? Upon the facts of the case depends the possibility of satisfactory results in the section and physiological reunion of divided compound nerves, and the grafting of one compound nerve upon another, where there has been so great a loss of the trunk of the nerve as not to permit the approximation of the distal and proximal portions of that nerve. Success in achieving satisfactory results by such operations, or a uniform lack of success, must afford a tolerably reliable answer to these interrogatories, much more reliable than experiments on some of the inferior animals. Experiments on animals require severe scrutiny, or they may mislead. Some of the experiments on animals were then referred to. Philippeaux and Vulpian divided in dogs the hypoglossal and lingual nerves and united the central end of the hypoglossal with the distal end of the lingual, and *vice versa*. The result of their experiments was that after a time motion and sensation were restored. Similar experiments were cited.

In April, 1880, Dr. E. P. Davis made for the speaker the following experimental operation. Under an anæsthetic the axillary plexus was exposed; the median was severed after its bifurcation, and also the ulnar and radial; the outer head of the median was united to the ulnar; the inner head of the median was united to the radial in the same way. At the end of ten days the dressing was removed, and complete paralysis of motion and of sensation found. In four weeks this began to disappear, and later a perfect condition of motion and sensation was observed. By this operation the distal portion of the median was left entirely without nervous supply, and yet there was no paralysis of the muscles or integument supplied by this portion of the nerve. Later investigation showed that in the dog and certain other animals there is an anastomosis of fibres between different nerves, forming an indirect route for the conduction of nervous force.

It must be concluded from experiments that motor, sensory, and trophic powers depend not on the nerve-trunk itself, nor on a difference of nerve-force, but on the organism at the end of the nerve. Professor Stephani is reported to have succeeded four times in uniting the distal end of the median with the proximal end of the musculo-spiral, and the distal end of the latter with the proximal end of the former. Immediately following the operation there was complete paralysis and atrophy, but in the course of six or eight months there was not only restoration of muscular power, but also harmony of action to an extent sufficient to permit the animal to run; but extending power was not realized perfectly.

The intergrafting of a section of a nerve taken from an inferior animal to replace extensive loss of nerve-structure will probably be of too uncertain success to constitute a standard operation; but we may well ask, Can the grafting of the distal end of a nerve in such a case upon the side of or into the trunk of an adjacent nerve secure to it a supply of nerve-force? Experiments made by Kawa would indicate that such might be the case. To establish this point experiments on dogs are valueless, on account of the free nerve-anastomosis. We must look for the solution of this question to the rare opportunities met with in the course of surgical practice where accident institutes experimental operations on man. A case has been reported by Després, where there was such extensive destruction of the median nerve as to preclude the possibility of approximating its ends. He therefore engrafted the distal end of the median upon the trunk of the ulnar. Fifty-four days after the operation the functions of the parts supplied with the median nerve were partially restored.

On the 1st day of last December the speaker himself had occasion to resect more than three inches of the right ulnar nerve in the removal of a neuroma from a male patient, aged 36 years. The distal portion of the divided nerve was grafted into the trunk of the median; the sheath of the median was removed, and the broadly-chamfered end of the ulnar laid in contact with it and secured by three fine catgut sutures. Immediately after the operation there was complete paralysis of the parts supplied by the ulnar. On the eighteenth day there was a slight return of sensation along the ulnar side of the ring finger, and there seemed to be some contraction of the flexor carpi ulnaris. Four months after operation the patient could feel

a slight touch on the ulnar side of the ring finger; there was no sensation to touch in the little finger, but an increased warmth in it. He can now adduct the hand with considerable vigor, but as yet has no power over the terminal phalanges.

The positive evidence which these two cases furnish at so early a date warrants further effort in this direction, and corroborates the other evidence of the correctness of the postulate that the function of a given nerve depends entirely upon the machinery of its end-organs, and not upon any intrinsic quality in the nerve-trunk itself.

A proposition to form a Congress of American Physicians and Surgeons was read by the Secretary. It was discussed and referred to a committee of three, to report on Thursday morning. This committee was appointed, consisting of Drs. J. Ewing Mears, William T. Briggs, and Christopher Johnston.

Afternoon Session.—Dr. Christopher Johnston, of Baltimore, Maryland, read a paper entitled

DIAGNOSTITIAL LAPAROTOMY.

The rapid advance of abdominal surgery now demands the attentive consideration of surgeons, and requires the expression of opinion as to the position of the line limiting interference in certain classes of cases. The labors of gynæcologists and surgeons have greatly lowered the mortality of laparotomy for ovariotomy and hysterectomy, but the pathological possibilities of the male and female abdomen still constitute many difficult problems, which the knowledge and zeal of surgeons are constantly striving to solve. The question arises, "How shall the seat of the pathological change be reached?" The answer is, "By laparotomy," which makes the diagnosis positive in cases of doubt, and is preliminary to other operations which may be required.

The propositions, then, are: first, that for abdominal surgical affections all possible operations ought to be attempted after the establishment of a precise diagnosis; and, second, that when a just diagnosis cannot otherwise be reached, it may and ought to be eked out by an exploratory incision. The mortality of abdominal incision without complication is low. A great consecutive mortality following a surgical procedure in no wise determines the want of value of the operation, while most cases recovering are to be considered a certain gain.

The abdominal incision intentionally diagnostitial is fraught with comparatively so little ill consequence that its high value—even necessity—may be fairly claimed as an established and proper aid to diagnosis. Of all conditions requiring laparotomy, those involving the uterus and its appendages probably fill the largest space; next we have those involving the alimentary tract.

Besides being a justifiable operation, abdominal incision becomes the bounden duty of the surgeon in a great variety of instances. Fenestral exploration gains in facility and loses in danger by frequent repetition, and it might eventually render the exploratory laparotomy unnecessary.

When is exploratory laparotomy called for? It should be stated that to a certain extent every laparotomy is diagnostitial. Two great classes in which exploratory laparotomy is demanded or permissible are to be recognized. First, all sorts of cases in which the diagnosis cannot be made without its aid; second, all those cases in which, a diagnosis having been made, no definite line of operation can be mapped out, and no abandonment of active measures be entertained or justified. As in these cases laparotomy holds the key, in all cases of doubt both as to what is the matter and what is to be done, it should be called upon to surrender that key. In intestinal cases the early operations are those which save life the oftenest; but abandonment ought not necessarily to follow delay in invoking the surgeon's aid.

DISCUSSION.

Dr. A. Vanderveer, of Albany, New York, remarked that experience shows us that simple incised wounds of the abdomen, without injury to the abdominal organs, will usually heal without difficulty, even if left to themselves. The mortality is very slight indeed. The cases which give us anxiety are those in which the bowel is injured and its contents escape into the abdominal cavity. These die inevitably if nothing be done. In these cases laparotomy should be performed. This is often opposed by the friends of the patient, and often by the attending physician. We have much to do in the direction of teaching the profession and the public the importance of early operation in these cases. Cases were cited of gunshot injuries of the intestine and of rupture of the intestine produced by external violence, in which the operation might have saved life if it had been permitted by the friends of the patient. The operation, as a rule, will not be permitted until the patient is in collapse: and it is then too late.

This operation should be done more frequently in the future than it has been in the past. As regards the mode of operation, the incision in the median line is by far the best. In some cases it would be impossible to reach the seat of disease by any other incision. In the closing of the wound, some recommend several lines of sutures, uniting the different layers of tissue separately. He believed that this was no advance on the old method of using sutures including all the layers of tissue. Where there is great distention of the bowel in intussusception, the discovery of the

seat of lesion is greatly facilitated by a procedure which he had seen Tait adopt in such a case. He opened the distended coil of intestine, permitted the gas to escape, and then closed the opening with sutures.

Dr. J. Ewing Mears, of Philadelphia, arranged the subject in this manner: first, external manipulation; second, internal examination, where this is possible; third, aspiration; and, finally, laparotomy. He considered laparotomy as much the most serious of all these methods. In this discussion the subject of laparotomy as a means of treatment does not call for consideration. He believed that the abdominal cavity should not be opened without due consideration. Death is a severe penalty to pay for the perfection of the diagnosis. We have already learned a great deal in regard to methods of diagnosis by external manipulation. The tendency at the present time seems to be in favor of opening the abdominal cavity rather than cultivating that essential skill by which the diagnosis may so often be made without resorting to operation. Tait's assertion that opening of the abdominal cavity is a matter of very little consequence has led many of the younger members of the profession to perform this operation without due consideration. Having exhausted other methods of diagnosis, he agreed with Dr. Johnston that, if the patient's life depend upon it, we should open the abdomen. He believed that in intestinal obstruction the abdomen should be opened, and that many lives have been lost by want of courage on the part of the surgeon. There is no question as to the duty of the surgeon in the case of gunshot wounds of the intestines.

Dr. Charles T. Parkes, of Chicago, Illinois, thought that the paper insists upon the necessity of exhausting all other methods of diagnosis before resorting to laparotomy. In the cases which he had seen where post-mortem examination followed, there was no evidence that the abdominal incision had anything to do with the fatal issue. In regard to operation in intestinal obstruction where the exhaustion is extreme, he recalled a case. Several years ago he was called to see a case of nine days' standing. The patient was in a state of extreme collapse. He was put to sleep and the abdomen opened; a small cyst was felt immediately beneath the fingers. Under the slight pressure it ruptured, and a quantity of offensive pus escaped into the abdominal cavity. This patient recovered. In such a case the best diagnostic skill could not determine the cause of the obstruction. In the case of a child 18 months of age, in which the operation was declined, intussusception of the small intestine was found at the autopsy, which was without adhesions, and could readily have been removed.

The abdominal opening should be made in the median line. In the closure of the wound, the simple suture going through all the tissues has been followed by such good results that we need use no other. Where there is much distention of the intestine, he considered the method by opening the bowel the best. He had used the exploratory needle on several occasions, but it is necessary to make a number of punctures. In two instances he had found extravasation of fæcal matter through these punctures.

Dr. McLane Tiffany, of Baltimore, during the last year had met with four cases of what he believed to be intestinal obstruction. In all four laparotomy was proposed. Two refused, and both of these died. Two accepted, and one of these recovered. The case that died was that of a woman, aged 73, in which the obstruction had lasted seven days. The intestine was enormously distended, and in the examination ruptured with the escape of the gas. After this it was extremely easy to find the seat of constriction. He thought the shock is likely to be less where the intestine is emptied. The time at which the operation should be performed must depend upon the acumen of the physician who sees the case. He agreed with the speaker as to the value of laparotomy as a diagnostic operation. It is not possible for any human being to recognize through the abdominal walls the manifold conditions of the organs present.

In regard to pistol-wounds of the abdomen, it frequently happens that the intestines escape injury, and in these cases it is a question when the operation should be done. The opening of the abdomen will not, in his opinion, do much harm. It is very desirable that there should be in hospitals special rooms devoted exclusively to this class of operations.

Dr. J. F. Thompson, of Washington, D.C., recorded two cases of laparotomy for the purpose of diagnosis. A woman, aged 36 years, had the history of an abdominal tumor lasting for several years. It presented the appearances of an ordinary ovarian tumor, with the exception that it had two sinuses communicating externally. One of the sinuses was traced back to the peritoneum without reaching any satisfactory explanation of the tumor. The peritoneum was then opened and the finger introduced, but no tumor in the cavity could be felt. Towards the abdominal wall a mass apparently embedded in the tissues could be distinguished. The wound was closed, and the patient recovered from the operation. The patient subsequently died, and the post-mortem showed that the tumor was an enlarged spleen which had fallen down below the umbilicus and had become attached to the abdominal wall.

The second case was one of apparently freely movable tumor in the right hypochondriac region. It was accompanied by excruciating pain. Operation was not recommended, but the woman and her husband insisted that something should be done, and,

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therefore, after keeping her under observation for some time, the abdomen was opened. The tumor, probably carcinomatous, was found to involve the transverse colon, which ran directly through the mass. There was also an attachment of the growth to the liver. The abdomen was closed, the patient recovered from the operation, and is still living.

Dr. W. H. Carmalt, of New Haven, Connecticut, stated that some time ago he was requested to operate in a case of intestinal obstruction, but the collapse was so great that he thought that it would not be proper to do so. Within thirty-six hours the patient died. The post-mortem showed that the obstruction was due to a band of adhesion. If the operation had been performed early, the patient might have recovered.

Dr. Johnston, in closing the discussion, said that there was a certain amount of hesitancy on the part of surgeons in regard to operating in cases of abdominal injury, on account of the people and on account of juries. To overcome these objections, it is necessary to educate the public to the true state of affairs. In those cases where the bowel is opened laparotomy leads us to the seat of disease, and if anything can be done we are then able to do it. He was happy to find his opinions supported by so many of the able minds of the profession.

Thursday Morning Session.—A communication entitled

A CONSIDERATION OF THE BACTERIA OF SURGICAL DISEASES

was read by Harold C. Ernst, M.D., of Jamaica Plains, Massachusetts.

After an extended description of the various bacteria he had met with in wounds, chronic abscesses, erysipelas, and other surgical affections, and an account of numerous experiments on animals, with an exhibition of specimens in culture-mediums and under the microscope, he presented the following conclusions:

I. The experiments conducted over so long a time, with the successful inoculation at the end of that time, indicate very plainly the retention of pathogenic powers of these organisms indefinitely.

II. Their permanence of form is also well established.

III. In order to obtain either a modification of their pathognomonic forms or of their pathogenetic properties, if this is possible at all, some different methods of investigation must be used than those which have hitherto been employed.

IV. Probabilities indicate that work in this direction, however, is not likely to be successful.

V. So far as the experiments go, they tend to show that no form of the suppurative process in man is unattended by bacteria, and that inoculation in the lower animals of pure cultures of these bacteria is always followed by more or less acute and extensive suppuration.

VI. The above conclusion is supported by the evidence of all workers in this field of research.

VII. A number of different clinical phenomena may be produced by the same organism,—all of these phenomena, however, coming under the general head of the inflammatory and suppurative processes.

VIII. Differences in results produced by the same micro-organism in different individuals depend upon influences outside of the bacteria themselves.

IX. These differences are caused by variations in the amount of the infectious material received into the system, and the locality or lesions by which it gains access; and also by variations in the individual condition,—the personal equation being a very large factor in making up the sum of any results in clinical bacteriological investigation.

The paper was briefly discussed by Drs. S. W. Gross, J. S. Billings, N. Senn, and D. Prince.

The report of the committee appointed to consider the subject of

THE ORGANIZATION OF A CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS,

offered at the meeting of Wednesday by Dr. C. H. Mastin, was presented. The following is an outline of the main points of the proposition:

In view of the fact that there are a number of special medical organizations now in existence in the United States, each having for its aim the advancement of the special department of medicine for which it was organized, and since the members of the said special societies are the representatives of the profession in America, many of whom are at the same time members of several of these special societies, attendance on the meetings requiring separate trips from home, often with much loss of time; therefore it appears necessary that some arrangement should be made with the different societies as to a uniform place and time of meeting.

The plan proposed is to unite the following-named Associations, under the title of "A Congress of American Physicians and Surgeons;" the American Surgical Association, the American Ophthalmological Association, the American Otological Association, the American Neurological Association, the American Laryngological Association, the American Gynæcological Association, the American Dermatological Association, the American Climatological Association, and the American Clinical and Pathological Association.

The plan of organization is as follows. Each society is to elect its own officers, hold its own sessions apart from the others at the

time and place of meeting, publish its own transactions, and do all other acts which, by virtue of its constitution and by-laws, it has the inherent right to do: thus preserving its own autonomy.

The Congress to be composed of these special societies, when in convention, and its meetings to be held in the city of Washington; the constitution and by-laws of the Congress to be formed by a committee of like number from each special society. The opening session of each annual meeting of the Congress to be devoted to such general business as may pertain to the interests of the Association as a whole; the Congress being presided over by a President elected annually, and who must deliver an opening address on the first day of the session. The President to be chosen by a nominating committee of one from each special society; the Presidents of the special societies to be *ex-officio* Vice-Presidents of the Congress. Membership in the Congress to be acquired only by virtue of Fellowship in one or another of the special organizations. The other officers to be elected as determined upon by the convention in session.

Any intention of offering an obstacle or opposition to any other organization in America was disclaimed. It is proposed simply as a plan of uniting into one great body the already existing special societies; and this plan is prompted by an honest conviction that such a union will prove of inestimable benefit to them individually and collectively.

The committee reported that they viewed with great satisfaction the perfection of a plan through which the meeting of the above-named societies at the same time in Washington may be accomplished, and recommended the adoption of a resolution that a committee of five be appointed, to confer with committees from other special organizations, to arrange details, and to report at the next annual meeting of the Association. The report was adopted. The President stated that he would name the committee to-morrow.

Afternoon Session.—The first paper presented was one by N. Senn, M.D., of Milwaukee, Wisconsin, on

THE SURGERY OF THE PANCREAS AS BASED UPON EXPERIMENTS AND CLINICAL RESEARCHES.

The following conclusions were submitted:

I. Restoration of the continuity of the pancreatic duct does not take place after complete section of the pancreas.

II. Complete extirpation of the pancreas is invariably followed by death, produced either by the traumatism or by gangrene of the duodenum.

III. Partial excision of the pancreas for injury or disease is a feasible and justifiable surgical procedure.

IV. Complete obstruction of the pancreatic duct, uncomplicated by pathological conditions of the parenchyma of the organ, never results in the formation of a cyst.

V. In simple obstruction of the pancreatic duct the pancreatic juice is removed by absorption.

VI. Gradual atrophy of the pancreas from nutritive or degenerative changes of the secreting structures is not incompatible with health.

VII. Physiological detachment of any portion of the pancreas is invariably followed by progressive degeneration of the glandular tissue.

VIII. Extravasation of pancreatic juice into the peritoneal cavity does not produce peritonitis.

IX. Crushed or lacerated pancreatic tissue is removed by absorption, provided the site of operation remains aseptic.

X. Complete division of the pancreas by elastic constriction is never followed by restoration of interrupted anatomical continuities.

XI. Limited detachment of the mesentery from the duodenum, as required in operations upon the pancreas, is not followed by gangrene of the bowel.

XII. In all operations upon the head of the pancreas, the physiological attachment of the peripheral portion of the gland should be maintained by preserving the integrity of the main pancreatic duct.

XIII. Partial excision of the splenic portion of the pancreas is indicated in cases of circumscribed abscess and malignant tumors, in all cases where the pathological product can be removed completely without danger of compromising pancreatic digestion or of inflicting additional injury upon important adjacent organs.

XIV. Ligaturing the pancreas at the point or points of section should precede extirpation as a prophylactic measure against troublesome hemorrhage and the extravasation of pancreatic secretion into the peritoneal cavity.

XV. The formation of external pancreatic fistula by abdominal section is indicated in the treatment of cystic abscess, gangrene, and hemorrhage of the pancreas due to local causes.

XVI. Abdominal section and lumbar drainage is indicated in cases of abscess or gangrene of the pancreas where it is found impossible to establish an anterior abdominal fistula.

XVII. Thorough drainage is indicated in cases of abscess and gangrene of the pancreas with diffuse burrowing of pus in the retro-peritoneal space.

XVIII. Removal of an impacted pancreatic calculus in the duodenal extremity of the duct of Wirsung by taxis or incision and extraction should be practised in all cases where the common bile-duct is compressed or ob-

structed by the calculus and death is threatened by cholæmia.

XIX. In such cases, the principal source of danger, extravasation of bile into the peritoneal cavity, should be avoided by preliminary aspiration of the dilated bile-ducts, accurate closure of the visceral wound with fine silk sutures, and absolute physiological rest of the organs of digestion during the time required in the healing of the visceral wound.

Remarks in discussion were made by Drs. P. S. Conner, of Cincinnati, A. Fenger, of Chicago, and Parkes, of Chicago.

Dr. Charles T. Parkes, of Chicago, Illinois, read a paper, supplemental to his paper of last year, reporting

TWO CASES OF CHOLECYSTOTOMY, BOTH ENDING FATALLY.

Case I. was that of a woman who had suffered with gall-stones for six years. The attacks of colic occurred at times as frequently as every week. Operation being decided upon, Dr. Parks performed cholecystotomy. The gall-bladder was found contracted, and reached with difficulty. Forty-three calculi were removed.

Case II. was that of a married woman, who for the past two years had suffered with attacks of pain lasting four or five days out of each week. There were jaundice and other symptoms of obstruction of the flow of bile. There was enlargement of the liver. The operation showed that the gall-bladder contained no calculi, but that the obstruction was caused by a body outside, which seemed to be an encysted calculus pressing on the duct. The gall-bladder could not be found. The patient died within twenty-four hours, and the post-mortem revealed the shrunken gall-bladder with the induration, which contained a gall-stone, pressing on the duct.

In discussing the paper, Dr. W. H. Carmalt related a case of obstruction of the gall-duct by calculi, with operation and recovery.

REPORT OF A CASE OF FATAL CÆSAREAN SECTION.

A case simulating and believed by all consultants to be abdominal pregnancy at full term was presented by the Secretary in the absence of the author, Dr. John B. Coleman, of Augusta, Georgia. The writer was requested to see S. A., colored, primipara, 24 years old, February 27, 1886. The attending physician believed her to be the subject of extra-uterine pregnancy. She believed herself to be at the end of gestation, and for three days had suffered with pains which were only quieted by the administration of laudanum. The entire abdomen was greatly distended, particularly in the upper portion. Vaginal examination showed procidentia, the os projecting three inches beyond the labia. The os was sufficiently patulous to permit the entrance of the index-finger. Rectal examination gave negative results. Palpation and auscultation showed the position of the fœtus to be dorso-anterior and obliquely transverse. Placental souffle could not be heard. The abdomen was so large and the fœtal heart sounded so distinct that the reporter also concluded that the case was one of extra-uterine pregnancy. The patient was examined by a number of surgeons, who agreed in the diagnosis. The history and the symptoms indicated that the patient was at the full term of pregnancy, and it was decided that immediate surgical interference was imperative.

On March 3 the patient was operated upon. An incision six inches in length was made in the linea alba. The tumor exposed much resembled the pregnant uterus. The incision was extended above the umbilicus, and it was positively determined that the case was one of uterine pregnancy. The uterus was drawn forward and its anterior wall cut through. He had not conceived it possible for the uterine tissue to be prolonged from the epigastrium to three inches beyond the vulva. A vigorous female child, weighing seven or eight pounds, was removed. The hemorrhage was not great. The placenta was removed without difficulty. The incision in the uterus was closed with deep and superficial catgut sutures. The peritoneum was closed with a continuous suture, and the abdominal wall with hare lip pins and superficial sutures. Antiseptic precautions were adopted throughout the operation, but septicæmia subsequently developed, the patient living four days.

Friday, Third Day, Morning Session.—Dr. T. F. Prewitt, of St. Louis, read the first paper, entitled

TRAUMATIC ANEURISM OF THE INTERNAL CAROTID ARTERY.

E. J., colored, 17 years of age, was shot by her husband early in January, 1885. The weapon used was a revolver carrying a No. 32 ball. The shot was fired at a distance of two feet, and entered the cheek over the malar bone, ranging backward. There was rather profuse hemorrhage from the wound of entrance. There was no wound of exit. The bleeding was controlled by compression. There was hemorrhage from the ear at the time, and this recurred on two or three occasions. For some time after the accident the patient stated that there was some hemorrhage from the mouth and nose on rising in the morning. There was slight swelling at the time, which gradually increased until April 2, when she was seen by the speaker. It then projected into the pharyngeal cavity, and rested against the uvula and extended externally from the anterior petrous portion of the temporal bone to the hyoid bone. The swelling pulsated in every direction, and gave

thrill and bruit. Immediately after the accident there was paralysis of taste and of the right side of the tongue. This continued.

With this history and with these symptoms, it was decided that there was an aneurism of the internal carotid artery, and that the vessel had been wounded near the carotid foramen.

It was determined to ligature at once the common carotid artery. The usual incision was made, and the dissection continued until the artery was exposed. A silk ligature was passed from behind forward. The vessel was then lifted, to be sure that the pulsation was arrested before the ligature was applied. Finding that it was, the vessel was then tied. The pulsation was at first arrested, but in a few minutes it could be again felt. In the absence of all precedent, it was concluded to extend the incision upward in front of the tragus, and determine the feasibility of opening the sac and tying the distal end. An incision was then made below the ear, and extended upward back of the ear. A cautious dissection revealed the fact that the sac filled all the space between the mastoid process behind and the condyles and ramus of the jaw in front. It extended to the base of the skull, to which it was closely adherent. It was therefore impossible to reach the artery in that direction. Further attempts were abandoned, the wound was closed, a drainage-tube inserted, and an antiseptic dressing applied. On the eighth day there was some hemorrhage from an opening near the angle of the jaw. This was repeated, and she spat up some blood on the following day. Examination showed a little coagulum at the angle of the jaw, which was removed, and the left forefinger thrust into the opening. No coagulum could be felt within the sac. The attempt to detect the entrance of the artery with the finger failed. In order to avoid the hemorrhage which would follow the removal of the finger, the sac was stuffed with lint treated with iodoform. This controlled the bleeding. The patient gradually became weaker, and died on the twenty-fifth day after operation, from exhaustion. Ten days after the sac was stuffed, epileptiform convulsions involving the facial muscles and the flexors of the forearm and hand appeared. These continued at intervals until her death.

The post-mortem showed the ball in the posterior part of the sac. The opening of the carotid artery was found close to the carotid foramen, and seemed blocked up with clot. The blood-vessels of the membranes of the brain were congested, particularly on the right side. The inferior petrosal and lateral sinuses were filled with thrombi up to the torcular Herophili.

The differential diagnosis of aneurism of the internal carotid artery from those of other arteries in this situation was then considered. As regards operation in this case, compression and ligation were considered; but compression was rejected, on account of the urgency of the symptoms. The patient was not a suitable one for this mode of treatment, being ignorant and irritable, and unfitted to endure the annoyances of this method of treatment. Neither were skilled attendants available.

Discussed by Drs. Thompson, Briggs, Agnew, Vanderveer, and Tiffany.

Dr. Roswell Park, of Buffalo, exhibited a tracheotomy-tube, a bivalve instrument, the blades opening laterally and provided with an obturator permitting its ready introduction. The great advantage claimed for the instrument was the ease with which it could be cleansed.

The next paper, by Roswell Park, M.D., of Buffalo, was entitled

LIPOMA TESTIS, OR A LARGE ACCUMULATION OF FAT IN THE TUNICA VAGINALIS.

J. P., aged 40, was first seen in September, 1885. For eighteen months the patient had noticed a slow but continuous enlargement of the right testicle. This was almost painless, but caused inconvenience by its weight. At this time the tumor had reached the size of a cocoanut.

Examination showed the scrotum to be filled with a large mass, the testicle being crowded into a small space at its upper part. This mass was solid, yet soft and not tender. Obscure fluctuation was noticed, but no fluid was obtained upon explorative puncture. The patient's general appearance excluded all idea of malignancy. The scrotal integument moved with perfect freedom over the tumor.

On October 4 the patient was operated upon. A free incision through the tunica vaginalis revealed a mass of densely-packed fat, which was slightly adherent, but was turned out without difficulty. On separating the lobular masses by the fingers, the right testicle was found not merely embedded in its upper part, but incorporated by apparently intimate tissue-connection. It was supplied with blood both from the testis and from the cord. The cord seemed to pass for a distance of two inches through the mass before reaching the testicle. No evidence of past or present hernia could be found, the ring and canal being no larger than on the opposite side. Finding the fibrous trabecula and blood-vessels radiating from the testicle to the fatty mass so numerous and distinct, it was decided to remove the whole mass, which was done. The patient recovered without incident. After removal the mass weighed three pounds. It was not possible to decide the exact origin of the fatty growth, whether it had started from the cord or from the testicle.

The literature of this subject is very meagre, the author being able to find but three similar cases on record.

Dr. Park also read a paper entitled

NEPHRECTOMY ON A PATIENT TWENTY-THREE MONTHS OLD.

B. B., born October 4, 1883, appeared at birth to be perfectly healthy. During the following winter the nurse noticed an enlargement in the right side of the abdomen, and the attention of the attending physician was called to it. The case was seen by Dr. Moore, who considered it a tumor of the right kidney.

July 31, 1885, the attention of the writer was called to the child, who appeared to be perfectly healthy. There was a history of steady enlargement of the growth. The bladder was examined with the sound, but no evidence of calculus was found. The urine contained numerous crystals of triple phosphates; otherwise normal. Examination of the abdomen revealed a firm resisting tumor, about the size and shape of the fœtal head at term, occupying the right half of the abdominal cavity. A portion of the fluid was removed and examined, with negative results. The diagnosis was fibro-cystic tumor of the right kidney, probably of congenital origin. Five weeks later the tumor was found to have increased decidedly in size, and operation was decided upon.

The operation was performed September 15, 1885. An incision was made in the right semilunaris. Slight adhesions were found. The peritoneum covering the growth was incised and the tumor shelled out without much difficulty. The pedicle was tied and dropped into the abdominal cavity. On the twelfth day the patient was removed to his home, and now, seven months after operation, is perfectly well. The tumor proved to be a fibro-cystic tumor of the right kidney, the cystic element predominating. Immediately after removal it weighed four pounds.

In searching the literature of this subject, the writer had been able to find but three cases in which the age of the patient approximated that of the one now reported. These cases were, respectively: one, two and one-fourth years, recovered; one, two and one-half years, died; and one at eleven months, death. The case reported, therefore, appears to be the youngest which has survived nephrectomy, he being twenty-three months old at the time of operation. The abdominal incision in this case was made not from choice, but from necessity, the tumor being altogether too large for extraction through a small opening in the lumbar region.

Dr. W. W. Keen, of Philadelphia, then read a paper on

STRETCHING OF THE FACIAL NERVE.

He related a recent case, that of a woman aged 48 years. She had had severe attacks of nervous trouble in early childhood, and had twice been paralyzed. Five years ago, coincident with menstrual disturbances, her right eyelids began to twitch, and in six months the whole face and the platysma were incessantly in spasm, which was increased by mental or muscular effort, such as eating, speaking, or being spoken to. Later, this was accompanied with constant pain.

In June, 1884, the right infra-orbital nerve had been resected, with partial relief for only six weeks. Not long after the twitching extended to the right side and leg.

April 2, 1886, Dr. Keen cut down on the seventh nerve by an incision behind the right ear, displacing the parotid gland forward and getting access to the nerve just after its exit from the stylo-mastoid foramen. Embedded in connective tissue, it required considerable search and dissection to lay bare the nerve in this case. The exact point of its entrance into the parotid was quickly discovered by a very weak current of electricity, one electrode being placed on the cheek, and the other, consisting simply of the wire from the cell, being touched at successive points from above downward. The trunk was then laid bare and stretched, the force being estimated at four or five pounds, just short of lifting the entire head.

Total facial palsy followed, with relief not only from the spasm in the face and neck, but also of that in the side and leg. The wound healed in four days, when the sutures were removed, the highest temperature having been 100.4.° The operation was done twenty-five days ago, and so far there has been no return of the spasm, and the patient was delighted with the result, the palsy being a grateful relief from the spasm.

He called attention to two cases in which a palsy existing prior to the operation was benefited by the nerve-stretching, both electrical and voluntary control being obtained to some extent, and he suggested that in persistent facial palsy stretching of the facial nerve be tried as a therapeutic operation.

The discussion of Dr. Keen's paper was postponed to the afternoon session.

Afternoon Session.—Dr. C. H. Mastin, M.D., of Mobile, read a paper on

SUBCUTANEOUS DIVISION OF URETHRAL STRICTURE.

The speaker enumerated the indications which render the operation necessary, and then described an operation which he had employed with entire satisfaction since 1868. The patient, being properly prepared, is put in the ordinary position for cystotomy. An anæsthetic is administered. A tube, open at both ends, is then passed down to the stricture. This protects the walls of the urethra, and puts on the stretch the face of the stricture. The tube is then filled with small whalebone probes, and one after another is tried, with the hope that one will enter the stricture. This being accomplished, the tube and probes are removed. The probe engaged in the stricture is then pushed forward, and a Wheel-

house sound carried down to the stricture. An incision, one-half inch in length, is then made in the anterior wall of the urethra on the groove of the sound. The sound is withdrawn a short distance, and the whalebone probe sought for as it passes through the stricture and drawn out of the original wound. Over the probe a gorget is passed having its blade upward. This is passed downward, cutting the stricture on its superior face. A catheter is then passed along the entire urethra into the bladder and the urine evacuated. The stricture is then examined, to determine whether or not any points of narrowing still remain. If there are, they are divided.

If in the first instance it is found impossible to pass the whalebone bougie, a staff with a deep groove is passed to the stricture and a small opening made. A whalebone bougie is then passed through the stricture and the parts thoroughly washed with cold water. The operation is completed as in the previous case. After operation a full-sized ordinary soft catheter is introduced to the prostatic portion of the urethra, but not into the bladder. The patient is put to bed on the left side, and directed to push the catheter into the bladder when the desire to urinate is felt, and to withdraw it beyond the neck of the bladder, but not through the stricture, after the urine has been passed. This is used only for the first twenty-four or thirty-six hours, to protect the wound from the contact of the urine. The speaker was opposed on general principles to allowing a catheter to remain in the bladder. At the end of the time mentioned the catheter is dispensed with. Immediately after the stricture has been incised and the calibre of the urethra restored, the external wound is closed with three fine pins, passing sufficiently deep to grasp the walls of the urethra. These are removed in from four to six days. In the course of eight or ten days the patient is able to return to his work. The maximum calibre of the urethra is restored by the use of graduated sounds.

The advantages of this operation are the short time of confinement for the patient, the freedom from hemorrhage, the quick union by primary adhesion, and the small amount of cicatricial tissue left.

Discussed by Drs. Danbridge, Prince, and Dunott.

Dr. J. Ewing Mears offered an amendment to the by-laws providing for the appointment of a committee of five, of which the President shall be chairman, to have charge of the preparation of the scientific work of each session. Laid over until the next meeting.

The President announced the following committee on the proposition looking to the formation of a congress of American physicians and surgeons: Drs. C. H. Mastin, Charles T. Parkes, J. Ford Thompson, J. Ewing Mears, and N. Senn.

The officers elected are as follows:

President.—Hunter McGuire, M.D., Richmond, Virginia.

Vice-Presidents.—T. F. Prewitt, M.D., St. Louis, and J. W. Gouley, M.D., New York.

Secretary.—J. R. Weist, M.D., Richmond, Indiana.

Recorder.—J. Ewing Mears, M.D., Philadelphia.

Treasurer.—P. S. Conner, M.D., Cincinnati.

Council.—Drs. Hunter McGuire, John S. Billings, A. McLane Tiffany, R. A. Kinloch, and Moses Gunn.

Honorary Members.—Foreign, Sir William McCormac; American, Prof. Henry J. Bigelow.

Active Members Elected.—Drs. H. H. Mudd, St. Louis, and Joseph Ransohoff, Cincinnati.

Time and Place of Next Meeting.—The second Wednesday of May, 1887, at Washington. Adjourned.

THE MEDICAL AND CHIRURGICAL FACULTY OF THE STATE OF MARYLAND.

THE Eighty-Eighth Annual Meeting of this Association was called to order at noon of April 27, in their hall at Baltimore, by the President, Dr. John R. Quinan. The usual order of business, including registration of delegates, reports of officers and committees, and the President's address, occupied the first day's session.

Dr. Quinan, after devoting the early part of his address to the laudation of the heroism of hard-working, conscientious physicians, and especially to that shown by certain ones whom he named, occupied the remainder of his time in discussing medical legislation in Maryland, and what rights the "Faculty" has under its charter granted in 1799. It appears from this charter that no one is allowed to practise medicine in any of its branches without first having obtained a license from an examining board appointed by the "Faculty." This charter is really an act of Assembly and a law of the State. It has never been repealed or changed, though not carried out for some fifty years or more.

The careful investigation of the subject, with a request for the best plans of action to be adopted, was referred to a special committee for future report.

The second day's proceedings opened with an able address by Colonel George E. Waring on "The Removal and Destruction of Organic Waste."

He began by stating that a large number of diseases are the result of the way in which people live, and that organic waste is inseparable from human life. By the proper removal and destruction of this waste the death-rate can be materially lowered, and some

diseases (of which typhoid fever is a type) can be prevented. He cited at considerable length statistics from English sources in proof of the statement, especially some very interesting ones concerning the army. Cholera kills fewer people than do diseases of the above-named types. Cholera has been a blessing instead of a curse, by causing more thorough and diligent sanitation, and preventing deaths from enteric and other fevers of preventable character. It also shows the utter futility of quarantine and the great benefit of internal sanitation.

Statistics were quoted from the census report showing that annually one hundred thousand deaths occur in the United States from preventable diseases.

Reference was made to the system of Paris, where tightly-sealed vaults are used. But typhoid fever is constantly present in fatal form. The best solution of the question has not yet been reached. The plan proposed by Colonel Waring was illustrated by supposing its application to a town of ten thousand inhabitants, in which we had the means and power to carry it out. Laying aside the provisions for storm-water or other abnormal waste, the plan provides for the average diurnal amount, which can easily be estimated.

Pipes six inches in diameter (which have a capacity of twenty cubic feet per minute, while the demand will be only four) are laid throughout the town. These have a proper fall, and connect with one fifteen-inch pipe, which carries all the wastes to the place of destruction at some distant point.

The destruction can be accomplished in one of three ways.

First. By emptying into a large and rapidly-flowing stream of water.

Second. By spreading over a surface of ground sufficient to absorb the materials.

Third. By emptying upon a tract of very porous land, natural or artificial, which acts by filtration.

Though any of these plans can be safe, it also is capable of great harm.

A necessity strongly insisted upon was the daily automatic flushing of the entire system.

The only safe way to dispose of organic waste is by immediate removal and destruction.

After this address, the report of the Section on Surgery was called for. Dr. Chambers, the Chairman, read a paper on the "Proper Treatment in Chronic Suppuration of the Glands of the Neck." Whether of tuberculous or scrofulous character is not positively proved, but they will undoubtedly in time produce tuberculosis, and hence are dangerous associates. The doctor therefore recommended their removal early and completely. Several cases were related.

Dr. Winslow, of the same Section, reviewed the recent work and literature on "Penetrating Wounds of the Abdomen," "Treatment of Intestinal Obstruction" (in which he condemned the methods of Mr. Hutchinson, of England, and favored laparotomy, also mentioning two successful cases recently occurring in this city, one being his own, the other that of Dr. West), and "Pyloric Stenosis."

Dr. Branham presented "Clinical Notes" of a number of cases showing peculiar departures from the usually natural symptomatology.

The fourth day's session opened with the report from the Section on Obstetrics and Gynæcology. Dr. B. B. Browne, the Chairman, read a paper on "The Curette as a Diagnostic and Therapeutic Agent in Obstetrics and Gynæcology." His conclusions are epitomized as follows:

1st. That its use is less painful and less likely to set up cellulitis than ordinary caustic and alterative applications.

2d. That it is an important diagnostic agent in all obscure affections of the uterus.

3d. That it is more effective for the removal of endometric growths than any other agent.

4th. That its proper use after abortions will prevent hemorrhage and septicæmia.

5th. That after labor the antiseptic fingers or hand used as a curette for complete evacuation of the uterus will lessen the danger attending the puerperal woman, will prevent fetid lochia, and will hasten the period of involution.

This was followed by Dr. Miltenberger, of the same Section, with a paper on "Puerperal Eclampsia." This was one of the ablest and most instructive papers of the entire meeting. After citing the death-rate at various periods up to the present, which is about eleven per cent. (which the author thought by careful previous treatment and proper management at the time of convulsions could be yet further reduced), the lecturer gave a careful analysis of the symptoms.

He discards the uræmic theory of its pathology, believing the origin to be in the medulla oblongata. He regards the convulsions as due to one of two causes, centric or eccentric irritation. Much interest was manifested in the views presented as to the treatment, and considerable discussion evoked.

Two statements are especially to be noted, the decided preference for craniotomy over version, and the strong advocacy of venesection in cases of centric origin, where there is congestion of face, neck, etc., especially if the patient is plethoric. This latter view was combated by Dr. Lynch, but endorsed by Dr. P. C. Williams, who were the principal members engaged in the discussion. Dr. Robert T. Wilson read a paper on a temporary clamp used in ovariotomy and allied operations. Dr. Cathell's paper was read by title and referred.

The session of the fourth day was occupied with the reports from the Sections on Materia

Medica, Necrology, and Sanitary Science. Dr. Rohé's paper, as Chairman of the last-named Section, owing to his absence was read by title and referred. Dr. Waters, of the same Section, discussed "Sewage and House-Drainage." The paper of Dr. R. H. Thomas, Chairman of the Section on Materia Medica, elicited discussion on the antipyretics. It was noted that they should be given in small doses frequently until the temperature is reduced to a safe condition, but that no attempt should be made to bring it down to normal or to keep it there.

The fifth and last day's session was occupied with reports from the Section on Psychology and Medical Jurisprudence and from committees, the reading of volunteer papers, and the election of officers. The committee on a lunacy bill reported such a bill as passed by the Legislature, signed by the Governor, and soon to become operative.

The committee appointed to secure the passage of a law establishing and maintaining an institution for the care and education of idiots and feeble-minded at the expense of the State, reported that such a bill had passed the Assembly, but had been killed in the Senate.

Dr. Frank Donaldson, Jr., discussed the new plan of pneumatic inspiration, and exhibited the cabinet used. The Faculty did not become very enthusiastic over the "machine."

The election of officers resulted as follows: *President*, Dr. G. W. Miltenberger; *Vice-Presidents*, Drs. Thomas Ossie and Richard Gundry; *Secretary*, Dr. G. Lane Taneyhill; *Assistant Secretary*, Dr. Robert T. Wilson; *Corresponding Secretary*, Dr. T. Barton Brune; *Reporting Secretary*, Dr. Richard Thomas; *Treasurer*, Dr. W. F. A. Kemp. The Executive Committee and Examining Boards were then elected, the standing committees appointed by the President, and the Faculty adjourned.

MEDA.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held April 28, 1886, the President, JOHN A. WYETH, M.D., in the chair.

PREGNANCY COMPLICATED WITH UTERINE FIBROIDS—RETENTION OF URINE, AND PYONEPHROSIS.

Dr. C. C. LEE presented a specimen removed from a married woman, 37 years of age, who was admitted to his service in the Woman's Hospital on the 16th of March, with the following history. She had been married two years, had never borne children, but eight months previous to her admission had had a miscarriage at about the second month of utero-gestation: the cause of the miscarriage was not known. When admitted, she had been ill for two months, complaining chiefly of retention of urine, with great dysuria, œdema of the lower extremities, and slight shortness of breath. It was supposed by her physician that she had an ovarian tumor. On examination she was found to be pregnant, and to have the following peculiar condition of the bladder. This organ was enormously distended with urine, extending above the umbilicus. On passing the catheter, between eighty and ninety ounces of urine were withdrawn, and the tumor subsided. After this had been done it was very easy to recognize the presence of uterine fibroids. The pregnancy was estimated to be between the third and fourth months. The uterus was displaced backward into the cavity of the sacrum, and the retroversion was so fixed that all efforts to restore the uterus were ineffectual. The fibroids were three in number, and their outlines could be distinctly made out. It was quite evident that the retention of urine had been due to the rapidly-increasing size of the fibroids, and that one of them had pushed the lower third of the bladder against the pubis in such a way as partially to close the exit for the urine. When the urine was examined it was found to be alkaline, with a specific gravity of 1012, slightly purulent, albuminous, and after the lapse of a few days it exhibited hyaline casts. The diagnosis was pregnancy, complicated with fibromata, which had produced retention of urine by pressure on the lower part of the bladder, and probably by secondary pyonephrosis. The cervix, however, had been crowded up so far that it was almost impossible to reach it, and was above the arch of the pubis, so that the question of the induction of premature labor was decided in the negative. The patient developed pneumonia on the tenth day after admission, and died with high temperature and the symptoms resulting from that disease. Whether the pneumonia was due to septicæmia or to some casual reason was not easy to determine, but it was believed possible that the patient had lost her life because premature labor was not induced. Miscarriage did not occur.

At the autopsy, the lower and middle lobes of the right lung were found in a condition of partial resolution, with a large quantity of serum in the pleural cavity of that side. The heart was flabby, but not otherwise diseased. In the abdomen the three fibroids presented themselves with the bladder drawn up over them to a great extent, and the largest of the three had caught the lower portion of the bladder against the pubis, and the fibromatous mass had also pressed the uterus into the cavity of the sacrum, thus giving an additional reason for the immovable retroversion. The uterus contained the fœtus, and presented no peculiarities. The ureters were dilated, slightly inflamed, and both kidneys had undergone extensive and rapid degener-

ation, so that only a small amount of kidney-tissue remained. The pyonephrosis was evidently of rapid development and due to the retention of urine caused by pressure upon the lower portion of the bladder by the fibroids.

Dr. LEE thought it probably a mistake that premature labor had not been in some way produced, although the condition of the parts was such as to render it almost impossible.

HEGAR'S OPERATION FOR SUBMUCOUS UTERINE FIBROID.

Dr. LEE presented the tubes and ovaries removed from a young woman who had a sessile, submucous, uterine fibroid, occupying nearly the entire fundus of the organ. Besides the loss of blood, the patient suffered with very severe pain, and had had two or three attacks of pelvic peritonitis. Dr. Lee determined to try to force the menopause by performing Hegar's operation, and he was influenced somewhat in this determination by the fact that he had in two or three cases attempted to remove the fibroid by means of the serrated spoon and with disastrous results. This patient had been ineffectually treated with injections of ergot. He found extensive adhesions, causing much difficulty in removing the tubes and ovaries, but the patient had done well since the operation.

DOUBLE PAPILLOMA OF THE OVARIES.

Dr. LEE also presented a double papillomatous tumor of the ovary which he had removed on Saturday last from a young woman who had suffered for two years from pelvic pain, increased at menstruation. Two consulting physicians had recognized a pelvic tumor which they regarded as multiple uterine fibromata, and Dr. Lee concurred in this opinion, but afterwards, on account of the severity of the pain, concluded to make an explorative incision, when he found the double ovarian tumor. The error in diagnosis was apparently due to the fact that the sac of the tumor was unusually thick, and gave no distinct sense of fluctuation. The uterus was normal. The patient was doing well.

CALCAREOUS DEPOSIT IN THE SPLEEN.

Dr. GEORGE F. SHRADY presented a specimen sent him by Dr. Hays, who removed it at autopsy from the body of a middle-aged white man who had died of typhoid fever in Charleston hospital, 1883. It consisted of a part of the outer surface of the spleen near the hilum, and was composed of either bony or calcareous matter. The specimen was referred to the Committee on Microscopy.

FREE BODIES WITHIN THE SAC OF A HYDROCELE.

Dr. WALDSTEIN presented a specimen which Dr. Lange had given him for examination. The case was one of varicocele occurring in a patient 21 years of age. After excising the same, Dr. Lange found that there was a small hydrocele, which he incised and removed from the sac small free bodies, which, on examination, proved to be of a fibrous character with calcification. Dr. Waldstein had examined the literature of the subject somewhat, and had found that Virchow had mentioned these bodies as originating in a pure *orchitis proliferans*, and that excrescences, fibrous in nature, generally from the albuginea, became calcified, and were freed, and then were found loose in the sac. Sometimes they also originated from the hydatid of Morgagni; but such was not the origin of the specimens presented.

ANGIOMA CAVERNOSA IN THE MUSCLES OF THE THIGH.

Dr. WALDSTEIN presented a tumor removed from the outer condyle of the left femur of a girl aged 5 years. It was painful, and interfered with flexion of the knee. It had not perceptibly grown during the last two and a half years. The attachments of the tumor were uncertain, but Dr. Sands and Dr. Waldstein were of opinion that it was situated within the muscle, and this view was confirmed at the operation for its removal, which was performed by Dr. Sands. The growth was found to be situated within the belly of the muscle, surrounded by a fibrous capsule, which was easily enucleated, except at its attachment at the lower extremity of the muscle. The muscular tissue in the neighborhood of the tumor had perceptibly degenerated. The tumor was found, on microscopical examination, to be an angioma cavernosa.

The PRESIDENT had a similar specimen which he had removed from the vastus internus muscle. He operated without hemorrhage by the application of an Esmarch bandage; but a surgeon who had undertaken to remove it previously had abandoned the operation on account of profuse hemorrhage.

REVIEWS AND BOOK NOTICES.

CANCER. A STUDY OF THREE HUNDRED AND NINETY-SEVEN CASES OF CANCER OF THE FEMALE BREAST. With Clinical Observations. By WILLARD PARKER, M.D. G. P. Putnam's Sons, New York and London, 1885.

For several years before his death, Professor Willard Parker was engaged in the task of arranging and classifying the cases of mammary cancer that had come under his observation, amounting in all to nearly four hundred. Although the work had been completed, his failing health prevented him from doing much in its revision. In accordance with his wish, the record has been published, —not, however, as an elaborate work, but

merely as the embodiment of practical observations and conclusions reached during a long and busy professional life by one who, with exceptional opportunities for experience, was endowed to an unusual degree with sound and cultivated judgment and extraordinary powers of observation. The matured opinions of such men deserve serious consideration.

Dr. Parker regards the process of the formation of cancer-cells as a process of mal-assimilation. The cancer-cell, it is claimed, probably has the power of producing its like by assimilating the nutritious elements of the blood, as other tissues have, and it may be considered as having a life peculiarly its own. Not having, however, a normal function to perform like other cellular tissues, it is not, like them, subject to wasting metamorphosis; and therefore it tends to keep adding to its bulk by reproducing itself, and by causing through infection a growth similar to itself in adjacent healthy cellular elements. The view is held by the writer that connective tissue may develop cancer-cells; that the epithelium of gland-structure may develop cancer-cells; and that cancer may proceed from any epithelial structure. But all these views are considered quite insufficient when they seek to limit the cancerous proliferation to the epithelium or to the connective tissue. In the cases examined, both breasts were affected in fourteen cases; in the others there was a slight preponderance in favor of the right breast (one hundred and seventy-four to one hundred and eighty-nine). The age at which in the greatest number of patients the disease begins is from forty to fifty. As to duration, experience indicates that the greatest number of deaths from cancer occur after the first year and before the end of the second year of the cancerous development. Mammary as well as other varieties of cancer has a traumatic exciting cause. The lesson is also taught that there is such a strong disposition among certain individuals to cancer as to warrant holding the opinion that there is a cancerous diathesis.

According to the author's observation, cancer is the most prevalent among peoples that are in the habit of living generously and addicted to luxurious habits, more particularly to eating highly-seasoned food, and who are more or less troubled with mal-assimilation, and consequently sympathetic irritation of the skin and mucous membrane. In the causation, anxiety, care, trouble, and sorrow may be assumed as exerting some influence, and the hypothesis is favored that cancer has for one of its causes mental affliction. Heredity exerts a much smaller influence in the production of tumors than is popularly believed. The effective causes of cancer, then, may be summed up as (1) luxurious living, (2) local irritation of an epithelial surface, (3) mental affliction, (4) dysmenorrhœa and other uterine irregularities. In treatment, a carefully-regulated diet is of primary importance. The latter portion of the *brochure* is devoted to the detailed tabulated account of the three hundred and ninety-seven cases, with notes of treatment.

Transactions of the Academy of Medicine in Ireland. Vol. III. Edited by William Thomson, M.A., F.R.C.S. Dublin, 1885.

This handsome volume of Transactions contains papers which are all of interest and some of decided value. The Pathological Section contains twenty-three articles, one of the most interesting being the report of a case of epithelioma resulting from irritation by crude carbolic acid, by Mr. Story, and one of tar-cancer by Mr. Ball. Mr. Wheeler has a successful case of removal of sarcoma of the anterior abdominal wall. In the Section on Medicine is a very valuable paper by Surgeon-Major Hamilton on cholera. Dr. Walter Smith's article on lupus, and Dr. Cruise's notes on Contrexéville and Royat Les Bains, are also noteworthy. The Surgical Section has comparatively few papers; but attention is attracted by the contributions of Mr. Ball on Melanotic Sarcoma of the Rectum, Mr. Franks on the Treatment of Flat-foot, and Mr. Thornley Stoker on Internal Urethrotomy.

Applied or Medical Chemistry. A Manual for Students and Practitioners of Medicine. By Laurence Wolff, M.D., Demonstrator of Chemistry, Jefferson Medical College, etc. Philadelphia, P. Blakiston & Co., 1885. 8vo, cloth, pp. 174.

This Manual consists of five sections, with an appendix. Part I. is devoted to Apparatus and Manipulations; II., to the Chemistry of Poisons; III., to Physiological Chemistry; IV., to Excretions and Concretions; and V., to Sanitary Chemistry; the Appendix containing a note on ptomaines, and tables.

This is a comprehensive and convenient hand-book for the student and the practitioner. A valuable feature in the work is the syllabus at the end of each chapter. Taken as a whole, it forms a practical, short course in medical chemistry, embracing such subjects as all medical students should be required to be familiar with before receiving their degree.

NEW REMEDIES AND CLINICAL NOTES.

Dr. Holmes's Toast to the Dentists.—In declining an invitation to dine at the Hotel Brunswick with the New York Odontological Society recently, Oliver Wendell

Holmes wrote, "I often think of the forlorn conditions of some of the great personages of history in the days when there were no dentists, or none who would be recognized as such by the dental artists of to-day. Think of poor King David, a worn-out man at seventy, probably without teeth, and certainly without spectacles. Think of poor George Washington, his teeth always ready to drop like a portcullis and cut a sentence in two. See him in Stuart's admirable portrait, his thoughts evidently divided between the cares of empire and the maintenance of the *status quo* of his terrific dental arrangements. Think of Walter Savage Landor's melancholy complaint that he did not mind losing his intellectual faculties, but the loss of his teeth he felt to be a very great calamity.

"I will venture to propose, then, the dental profession, and their association as its worthy representative: it has established and prolonged the reign of beauty; it has added to the charms of social intercourse and lent perfection to the accents of eloquence; it has taken from old age its most unwelcome feature, and has lengthened enjoyable human life far beyond the limit of years when the toothless and purblind patriarch might well exclaim, 'I have no pleasure in them.'"

HYDROGEN PEROXIDE IN ALVEOLAR ABSCESS.—Dr. G. W. Smith, of Cincinnati, read a paper before the Mississippi Valley Association on the use of hydrogen peroxide in dentistry, in which he reported very satisfactory results from the treatment of chronic alveolar abscess with injections of this agent. The curative effects were decided and prompt. He also found it invaluable in the treatment of Riggs's disease of the gums, in which the alveolar processes are subject to destructive suppurative inflammation.—*Dental Register*, April, 1886.

MISCELLANY.

THE AMERICAN MEDICAL EDITORS' ASSOCIATION held its annual meeting May 3, at the St. Louis Press Club. After an address by the President, H. O. Walker, M.D., of Detroit, the editors sat down to dinner as the guests of the Medical Press and Library Association. J. V. Shoemaker, M.D., of Philadelphia, was elected President; Dudley Reynolds, M.D., of Louisville, Kentucky, Vice-President; and William Porter, M.D., of St. Louis, Secretary. This was the most successful, harmonious, and enjoyable meeting that the Association has ever held, owing to the cordiality of the local medical press.

DR. W. A. M. CULBERT, Newburgh, New York, says, "Colden's Liquid Beef Tonic is an excellent article for the purposes for which it is offered. I recall patients by whom it was taken with eagerness and great benefit after domestic beef-teas and other beef-preparations had become repulsive."

THE AMERICAN CLIMATOLOGICAL ASSOCIATION held its annual meeting in this city during the week. A report of its proceedings will appear in our next issue.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM APRIL 25, 1886, *TO MAY* 8, 1886.

MAJOR HENRY R. TILTON, SURGEON.—From Department of the East to Department of California.

MAJOR JOHN BROOKE, SURGEON.—From Department of California to Department of the East.

CAPTAIN EDWARD T. COMEGYS, ASSISTANT-SURGEON.—From Department of Missouri to Department of the East.

CAPTAIN AARON H. APPEL, ASSISTANT-SURGEON.—From Department of the East to Department of Missouri. S. O. 106, A. G. O., May 6, 1886.

MAJOR FRANCIS L. TOWN, SURGEON.—Granted leave of absence for eight months, with permission to go beyond sea, to take effect when his services can be spared by his department commander. S. O. 101, A. G. O., April 30, 1886.

CAPTAIN JOSEPH K. CORSON, ASSISTANT-SURGEON.—Granted ten days' extension of leave of absence granted in Orders No. 79, April 15, 1886, Jefferson Barracks, Missouri. S. O. 97, A. G. O., April 26, 1886.

CAPTAIN WILLIAM J. WILSON, ASSISTANT SURGEON (Plattsburg Barracks, New York).—Granted leave of absence for one month, on surgeon's certificate of disability. S. O. 25, Division of the Atlantic, April 27, 1886.

CAPTAIN WILLIAM J. WILSON, ASSISTANT-SURGEON.—Died, May 2, 1886, at Plattsburg Barracks, New York.

CAPTAIN ROBERT B. BENHAM, ASSISTANT-SURGEON.—Ordered from Department of Texas to Department of Dakota. S. O. 97, A. G. O., April 26, 1886.

FIRST-LIEUTENANT GEORGE F. WILSON, ASSISTANT-SURGEON.—Ordered for duty at Fort Shaw, Montana Territory. S. O. 37, Department of Dakota, April 26, 1886.

FIRST-LIEUTENANT A. S. POLHEMUS, ASSISTANT-SURGEON.—Relieved from duty at Presidio of San Francisco, California, and ordered for duty as post-surgeon, Fort Halleck, Nevada. S. O. 28, Department of California, April 26, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM APRIL 25, 1886, *TO MAY* 8, 1886.

ASSISTANT-SURGEON F. W. F. WIEBER.—Detached from Receiving-Ship "Vermont," and ordered to the "Hartford."

ASSISTANT-SURGEON ELMER C. TRACY.—Ordered to the "Vermont."

PASSED ASSISTANT-SURGEON J. R. WAGGENER.—Detached from the "Hartford," and ordered to the "Iroquois."

SURGEON J. F. BRANSFORD.—Detached from the "Iroquois," to proceed home and await orders.

ASSISTANT-SURGEON ISAAC W. KITE.—To duty at Naval Hospital, Brooklyn, New York.

ASSISTANT-SURGEON ISAAC KITE.—Ordered to Naval Hospital, Brooklyn.

PASSED ASSISTANT-SURGEON W. J. SIMON.—Ordered for temporary duty to the Naval Academy, Annapolis.

PASSED ASSISTANT-SURGEON GEORGE C. LIPPINCOTT.—Ordered for temporary duty to the Naval Academy, Annapolis.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, MAY 29, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON CASES ILLUSTRATING HYPERTROPHIC ELONGATION OF THE ISTHMUS CERVICIS, AND UTERINE FIBROID.

BY WILLIAM GOODELL, M.D.,

Professor of Diseases of Women and of Clinical Gynæcology at the University of Pennsylvania.

Clinic held May 19, 1886.

GENTLEMEN,—Our first case is that of a married woman, about 40 years of age, who has borne several children. She has a disease with a long name,—hypertrophic elongation of the supra-vaginal portion of the cervix of the uterus,—which is, however, by no means an uncommon affection. It is present in many women who are supposed to be suffering with prolapse of the uterus.

The original cause of this disease is generally some injury, and the most common form of injury giving rise to it is laceration of the cervix during childbirth. It is, therefore, as a rule, a disease of married women who have had children, but not exclusively, for I have seen it in aged virgins. Just here I may mention that in these cases it has a different appearance. In married women who have borne children the projecting cervix resembles the snout of a pig; in the virgin, on the contrary, the conical cervix, with its small os, looks exactly like the male organ in a state of erection; this at least has been the case in the few cases I have seen in virgins or married women who have not borne children.

The persons who are most subject to this condition are those who have to lift weights at a disadvantage. For instance, take a cook who has a laceration of the cervix to begin with. The denuded portion of the cervix rubs against the vaginal wall, keeping up irritation and attracting an increased blood-supply and more or less inflammatory deposit, making the cervix larger and heavier than normal. Cell-growth is stimulated, hypertrophy occurs, and the force of gravity constantly pulls upon the cervix. While in this condition, the cook has to lift a pot of potatoes from the fire, in doing which she contracts her abdominal muscles and depresses the diaphragm, thus tending to force the cervix down still farther into the vagina and finally cause its extrusion. The washerwoman, also, who has to lift heavy baskets of clothes, is very subject to this malady. Indeed, it is among persons who have to work hard that you will find it almost without exception. It is exceedingly rare among women of means. I recall only one case in a person in affluent circumstances, and I found in that case that during a former period of her life she had been obliged to labor very hard.

How shall such cases be treated? Pessaries in such a condition are a delusion and a snare. No pessary can be retained when the cervix projects from the body and the vagina is turned inside out like a stocking; but when the disease has just begun, you may be able to support the uterus by inserting the Hodge pessary reversed; that is, with the curved end to the front. If the patient can bear this, it may be of service in keeping up the cervix; in the later stage, however, it will not answer. Some cases may now be benefited by wearing a supporter, the cervix being held in a cup-shaped receptacle on the end of a stem, fastened to straps attached to a belt passing around the waist. If the disease has not progressed far, this also may serve the purpose, but if it has advanced beyond a certain point such a pessary will do harm, because it pushes up into the vagina a hypertrophied and elongated cervix, and the pressure cannot be borne. Next comes the question of operation. Which operation shall be selected? Since Dr. Emmet brought before the profession his method of operating for laceration of the cervix, general attention has been called to this condition, and physicians everywhere have been taught to recognize it, and to operate as a matter of duty. As a result, the condition which you see in this patient is much less common than it used to be. (Patient etherized.)

Here you observe a snout-like projection from the vulva protruding between the woman's thighs. She has trouble in urinating, and I will explain why it occurs. The bladder has been brought down with the inverted vagina, and now is in front of this hypertrophied cervix. The urethra,

which normally passes through the triangular ligament in a curve with the concavity to the front, now has its relations reversed, so that it is convex to the front, and passes backward and downward to reach the bladder; after leaving the triangular ligament it is bent at an angle backward, and this makes it difficult for the patient to empty her bladder. I will demonstrate this to you by introducing a sound through the urethra into the bladder. You see that, instead of going upward and to the front, it turns abruptly to the back, and you observe the sound moving about in the bladder on the front of this fleshy mass.

In these cases the canal of the uterus usually measures five inches. I have seen it seven. In this patient the sound enters to the depth of five and a half inches. You notice that in reality the vaginal portion of the cervix is not elongated; if anything, it is rather shortened and clubbed. We find the supra-vaginal portion decidedly hypertrophied and elongated. This portion of the cervix—the isthmus, as it is called—contains few muscular fibres, and is mainly fibrous tissue. The cervix has been lacerated; it has become enlarged and increased in weight, thus producing traction upon the parts above. The fundus being kept up by the ligaments, the portion between the cervix proper and the fundus becomes stretched, elongated, and hypertrophied. The vagina is completely everted, and the perineum is functionally imperfect.

One object sought to be attained by the operation is to promote absorption. Two operations will be needed: first, amputation of the vaginal portion of the cervix; and, secondly, one to restore the perineum. I prefer not to do both simultaneously, as it is too much to perform two such operations upon a patient at one sitting. I have done so when circumstances demanded it; but, when I have a choice, I prefer to amputate the cervix first, and to leave the perineum for some future operation.

When complete prolapse of the uterus occurs, the broad ligament yielding so as to permit the fundus to come outside the body, there will occur a secondary atrophy of the uterus, and instead of the canal measuring five and a half inches, it will measure only three and a half, owing to absorption and the absence of traction.

In proceeding to amputate a part of this cervix, it is well to bear in mind the limits of the bladder in front, and of Douglas's pouch on the posterior surface. The bladder we can determine with the sound, but there is no criterion with regard to the posterior *cul-de-sac*, and we may open it. Almost every gynæcologist has cut into it; as you will remember, I did last week in a case of cancer, where I extirpated the entire uterus. Having found the lower border of the bladder, a straight needle armed with a double silk ligature is made to pass through from front to back about three-fourths of an inch from the extremity of the cervix. This is to prevent the cervix from escaping from me and getting out of reach. We shall now apply a sort of Esmarch bandage, a rubber tube, wound several times around the uterus above the point of operation, in order to prevent hemorrhage.

I am not sure but that the time may come when it will be considered proper to remove the whole womb for this disease.

Now, with a scalpel, I proceed to amputate the cervix, which I hold with a double tenaculum. I will endeavor to avoid cutting Douglas's pouch, but if I open it I shall sew it up again. I have opened it several times without losing a case; but I should prefer not to expose the peritoneum to the air of this amphitheatre.

You now see the large stump with the os in the middle. This raw surface I shall proceed to cover by using Hegar's stitches, which radiate in every direction from the cervical canal to the circumference. When these stitches are tightened the contraction opens the cervical canal, and the cicatricial tissue which is formed will have the same effect. These stitches are of silver, and are clamped with shot. Wherever there is a tendency to bleed I insert a stitch. You will be astonished to see how much diminution in the size of this uterus will occur in a week's time as a result of the operation. Much of this surface will heal by first intention, but a small part will heal by granulation, which will cause the formation of a cicatrix, and produce subsequent contraction.

The only objection to this operation is that there is a tendency to secondary hemorrhage. In such an event, I should pack the vagina as hard and as tightly as possible. This is more likely to occur where ether has been given.

After removing the rubber bandage, I find several bleeding points, to which I shall apply the Paquelin cautery.

The objection to the amputation by the galvanic wire or the hot knife is that it produces so much cicatricial tissue. It makes the os so small that menstruation is rendered difficult and painful; and it is very hard to remedy it. Here, you observe, the cicatricial contraction will tend to draw the os open, instead of to close it. The small amount of denuded surface which has been left will granulate, and in that process will aid the retrogressive metamorphosis in this hypertrophied cervix. A granulating surface is better for this purpose than union by first intention, but I prefer to have the greater part of the wound to heal by first intention; otherwise the cicatrix would be too dense and hard. In the books this operation appears to be perfect; but in practice a greater or less amount of surface is left to granulate. Two of the wire sutures have been purposely left long in order to pull the uterus down in case of hemorrhage, so as to see where the bleeding comes from. The stitches must all be counted, so that when we come to remove them we shall not leave any, as they are liable to be embedded in the tissues. We shall leave the stitches in for two weeks.

UTERINE FIBROID UNDERGOING SPONTANEOUS ENUCLEATION.

This next case has a curious growth from the uterus distending the vagina. There is an offensive purulent discharge, and a suspicion of malignant disease. The diagnosis has not yet been made, and it has puzzled several good physicians. I am afraid that it will prove to be a sarcoma.

In order to make a satisfactory examination it will be necessary to give ether.

Having syringed the vagina with vinegar and water, I proceed to examine the patient, and find that the mass in the vagina has a pedicle from the mucous membrane to which it is attached above. It is a fibroid in a process of self-enucleation. The lower portion filling the vagina is soft and rotten. The growth is fibrous in character. I am now twisting it; and now it comes away in these strong vulsellum forceps.

There may be some bleeding after this: should it occur, I shall introduce a tampon into the cavity of the womb.

ORIGINAL COMMUNICATIONS.

NOTES OF CASES OF RAYNAUD'S DISEASE, AND OF GANGRENE COMPLICATING DIABETES MELLITUS.

Read before the College of Physicians of Philadelphia, March 3, 1886,

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I.—RAYNAUD'S DISEASE.

SEVERAL names have been proposed or terms applied to indicate the pathological and clinical phenomena which are so graphically portrayed in the following case. It belongs to that interesting group of diseases of the nervous system in which vaso-motor and trophic disturbances are paramount. As will be seen, in all probability the nutritive changes resulting in gangrene were probably due to causes extraneous to the nervous system. There were present in addition, however, marked vaso-motor phenomena; and if, with Dr. Barlow, of London, we consider that the paroxysmal character of the circulatory disturbances is the essential clinical manifestation of Raynaud's disease, then the term is a fitting one to apply to this case. As may be inferred from the above, and as the history will show, the clinical appearances and pathological changes were complex. What immediately concerns us, however, was the presence in a high degree of the vaso-motor disturbances known as local syncope and local asphyxia.

At the time this case was under observation, and when we were deeply involved in a study of the known facts of this singular disease, Dr. C. L. Dana* treated of it in a very able and exhaustive article, entitled "The Acro-Neuroses." This term he used to include all the functional affections of the extremities, and under the sub-heading of "Vaso-Motor and Trophic Disturbances" he included the group of cases of which this is an example. It would be supererogatory, therefore, to traverse the same ground, and we will,—at the risk of some repetition, however,—after presenting some few facts, be content with a report (we fear too wearisome) of our case, with such remarks as its special features may suggest.

* New York Medical Record, July 18 and 25, 1885.

Much difficulty has attended the selection of a name to characterize the *ensemble* of symptoms which is presented in these cases. Names, it is true, are applied which vividly signify particular stages. What more striking than "dead fingers," *digiti mortui*, or "local syncope"? The same may be said of "local asphyxia," descriptive of the cyanosis; though possibly from it an improper conception of the pathology of the disease may be formed. "Symmetrical gangrene" tersely describes the terminal anatomical changes, but it is not, as Southey suggests, a strictly correct term, for often gangrene is absent, and quite often it is unilateral only. "Erythromelalgia" has been suggested, and Dr. Dana thinks Mitchell and Raynaud independently described the same affection; but it appears—and if the statement is not correct we hope to be corrected—that Dr. Mitchell, who was familiar with Raynaud's work, describes states in which the blood-vessels were generally dilated, and pain was a most marked antecedent and also a concomitant feature.

Raynaud's disease should be defined as that vaso-motor affection which is characterized by tonic spasm of the blood-vessels, causing local syncope, local asphyxia, and gangrene. In local syncope the parts affected are "dead," numb, cold, or pallid. In local asphyxia the parts are blue or mottled, lower in temperature than normal, and the seat of intense, burning pain. Both of these circulatory disturbances may be attended by diminished tactile sense and local sensibility, and they occur in paroxysms, which may terminate either in the restoration of the parts to their normal condition, or the one (local asphyxia) may end in scleroderma (Grasset, Hallopeau).* These phenomena occur not only in paroxysms, often in quick succession, but also are marked by distinct intermittency, and the entire disease is frequently characterized by pronounced remissions. Gangrene occurs only as a sequence of the conditions just described, and may be described as dry gangrene or mummification, as the form resembling frost-bite, and in dry, hard plates or parchment-metamorphosis of the dead tissue. It is generally attended with much pain, but is not the cause of septic complications or of death (Southey).

Local syncope, be it remembered, frequently occurs independently of sequential changes. Many cases have lately been recorded; among the most interesting ones those of Richardson,† of London, may be mentioned. It may be due to peripheral impressions, as seen in the action of cold, or to central functional excitation, as in a case of general hysterical paralysis related by Mitchell,‡ in which there was spasm of the vessels of the left leg, so that it became white and cold. Another interesting case is recorded by the same observer, in which, after injury to the nerve of one leg, the unaffected member became "dead." §

Local asphyxia likewise is observed alone in all grades, from the mottling that is seen in delicate children exposed to cold and the mottling which Cavafy‖ described as pathological, to the cyanosis that attends heart-disease or goes with scleroderma.

The grouping together of these vaso-motor phenomena, their occurrence in symmetrical parts of the body, and in the sequence stated above, are, however, the essential features of Raynaud's disease. In addition to other features of this curious disease, it may be stated that it occurs frequently in females at an early age and after a previous debilitating disease or in the course of some diathetic ailment. The origin of many cases has been attributed to malaria, while three cases are recorded as occurring in the course of diabetes.¶ The duration of the disease varies from a few weeks to years.

One of the most striking characteristics is the intimate relation of these vascular and trophic changes in the extremities to other affections of the sympathetic nervous system. These allied affections have been remarked by Barlow,** and he calls attention especially to paroxysmal hæmatinuria. Paroxysms of this latter disease alternated with the limb-disorder in one of his cases, and they were fundamentally similar in that both occurred intermittingly, were worse in warm weather, rarely if ever

* See also Finlayson "On the Occurrence of Symmetrical Gangrene of the Extremities in a Case of Scleroderma Adultorum," The Medical Gazette, 1884–85, i. 315. Local syncope antedated and accompanied the scleroderma; the gangrene complicated it, causing death.

† Richardson, Asclepiad, January, 1885.
‡ Mitchell, Diseases of the Nervous System, Philadelphia, 1885, p. 32.
§ Mitchell, Diseases and Injuries of the Nerves.
‖ Cavafy, Trans. Clin. Soc. Lond.
¶ Barlow, Raynaud, Fox.
** Trans. Clin. Soc. Lond., xv. p. 167, 1879.

occurred at night, and were ushered in by yawning and vomiting.

Hutchinson* recorded a case in which iridoplegia was associated with local syncope, asphyxia, and gangrene of the ears. The patient was a female, aged 30, who could not resist cold. The pupils were partially dilated and absolutely fixed. Recovery followed. More curious still is the case of Weiss.† The disease was seated in the extremities, and was of many months' duration. During its course temporary aphasia occurred twice, which he believed to be due to an ischæmia of the speech-centres. There was no vascular or organic nerve-disease. You will recall that Raynaud observed contraction of the central artery of the retina in one of his cases, and attributed it to vaso-motor influences. Klein and Scetlin prove, however, to the satisfaction of Landois, that this artery is not influenced by section or stimulation of the sympathetic.

In one of Southey's‡ cases there was joint-involvement to a high degree, and the case looked not unlike a rheumatic purpura. He attributed the joint-changes to nerve-influences, however; and cases are recorded of swellings, induration, and contractions of the joints. Hutchinson sees in these cases a possible explanation of the pathology of "end-joint" arthritis.

Vascular and trophic skin-changes also alternated with or accompanied the disease in the extremities. Among others may be mentioned urticaria, erythema nodosum, and eczema.

A word as to the pathology. There is no doubt that the phenomena are due to a spasm of the blood-vessels. This spasm has been attributed to central organic diseases or functional excitation, to excitability of the sympathetic ganglia along the vertebra or to those on the blood-vessels, and, finally, to degeneration of the peripheral nerves.

The latter possibility finds an advocate in Pitres,§ who found in cases of symmetrical gangrene extensive peripheral neuritis with degeneration of the nerve-fibres. On the other hand, Semmola found degeneration of the central vaso-motor nuclei, as well as the vagus, in a case of functional heart-disease and asphyxia of the extremities. No other evidence has been furnished either of peripheral or central degeneration, and the theory of reflex spasm receives the most support. Raynaud believes there is great exaggeration of the irritability of that part of the central gray matter which presides over vaso-motor innervation, and hence any slight peripheral stimulation reflexly causes spasm.

Webber would have us believe that the reflex arc is completed on the vessels themselves, and many others teach that spasm occurs from the local irritation of sympathetic ganglia or filaments connected with the vessels by a poisoned blood. Especially, they say, these phenomena are presented if the heart is too weak to overcome the peripheral spasm. This theory is similar to the one which explains the vascular phenomena of Bright's disease. The localization to the extremities of the vascular phenomena in Raynaud's disease is due to the exaggerated local excitability of the sympathetic ganglia.

Some speculations have been advanced to explain the phenomena of syncope and asphyxia. Local syncope has been attributed to slight reflex spasm of the vessels, local asphyxia to a profound arrest of the circulation. The former is due, some hold, to arterial and venous spasm, the latter to arterial spasm alone. Again, Nedopil believes that local asphyxia is due not only to an arrest in the supply of arterial blood, as in syncope, but also to capillary stasis of the venous blood. With these preliminary remarks, we prefer to present the history of a case which exemplifies some of the interesting features just detailed.

Case.—One of the peculiar features of the patient whose history I am about to detail was a great tendency to blushing. From early childhood he was known to be shy, and this mobility of the vaso-motors was excited on the slightest provocation. Another was his susceptibility to cold,—so marked that he would not indulge in the usual winter sports of his boyhood days. On account of this sensitiveness, rather than from excessive exposure, he had an attack of chilblains five years previously. Then, again, he was easily affected by tobacco, for, although he had tried faithfully, yet he could not "harden" himself sufficiently to prevent his becoming pallid on occasions, and having repeated attacks of pallor noticeable to his companions when smoking had been excessive. Finally, this susceptibility of his sympathetic system to impressions may be illustrated by the frequent

* Hutchinson, Med. Times and Gazette, 1871, vol. ii. p. 678.
† Weiss, Zeitsch. f. Heilk., 1862, vol. iii. p. 233.
‡ Southey, Trans. Clin. Soc. Lond., vol. xvi. St. Barth. Hosp. Rep., vol. xvi.
§ Pitres and Vaillard, Archives de Physiol. norm. et path., 1885, No. 1, pp. 106–127.

occurrence, without discoverable cause, of vertigo. About five years ago, J. H. had an attack of intermitting fever. This was succeeded by spells of vertigo, which developed at any time, without cause, and were accompanied by blindness. The attacks lasted but a few moments, and were relieved by sitting down. The vertigo was subjective, and had not been preceded nor accompanied by aural or gastric phenomena. After the lapse of a year, the attacks, which were of daily occurrence, gradually but completely disappeared.

Aside from these circumstances, the medical history of the young man was uneventful up to the time of the present attack. He had never had any other illness; never migraine; never syphilis nor gonorrhœa. His habits had been good; he had never indulged in excessive venery. The mother of J. had been insane for five years; caused by prolonged mental strain. A sister had been very hysterical; but otherwise she and two other sisters had always been well. The same may be said of one brother; of the other, that he is subject to rheumatism. The father was healthy, complaining only lately of cardiac pain and dyspnœa. His maternal grandparents were very well; his paternal grandfather and two uncles died with heart-disease.

J. H. came to me on the 12th of July, 1885, with the following immediate history of his complaint. On the 17th of May preceding he went out as milk-server, having previously been a paper-hanger. In addition to the serving of the milk, he had to "ice up" a great deal, and also attend to a horse. The handling of the ice was trying to his hands, but did not prevent him from working. On the fourth day of his new work a large lump of ice fell on the palm of his left hand, bruising it severely. Five days after this his hand turned suddenly white, and became very cold, numb, and the seat of pain. At the same time he experienced slight tingling and numbness in the right hand. The paræsthesia of this member disappeared in about a week. The pain in the left hand was lancinating and prevented sleep. He continued at work, however, but it was interfered with by the pain, numbness, and stiffness.

Nearly five weeks after the receipt of the injury (July 1), he was awakened by a severe pain in the hand, and on inspection found its color had changed to a dusky red. The pain continued not only in the hand, but was also felt along the brachial artery. A short time before this change he noticed slight blueness of the finger-tips.

On the occasion of his first visit the following appearances were observed. The hand is very cold, and the coldness extends up the arm to the elbow. The surface-temperature is lower than my thermometer will register. On the dorsal surface of the hand there is a general venous or dusky redness, extending one inch above the wrist-joint. The blueness is deeper towards the tip of the finger. The index-finger is markedly cyanosed. All the nails are blue. The little finger is also quite blue, the middle finger less than the other two. The last phalanx of the index-finger is blue-black, increasing in depth of hue from the median line to the sides as the palmar surface is approached. The thumb is similarly discolored. Pressure on the skin causes pallor, which instantly on removal of the pressure changes to red, the wave of color beginning in the periphery. On pressing the fingers, instead of pallor, a bluish tint of the anæmic skin is observed. Here the color-changes are more rapid. The skin of the fingers about the joints is wrinkled. The cyanosis is deeper on the finger-tips. The hue is of equal intensity on the little and index fingers, the thumb is the next deepest, the middle the next, and the ring-finger the least discolored. The more marked hue of the first two fingers indicated does not give change to pallor on pressure, and that of the thumb and middle finger but slightly. On the index-finger, over the terminal phalanx, one-quarter of an inch from the extreme end is a small sphacelus the size of a bean; its boundary is irregular, and it is surrounded by an area of redness. A deeper-colored spot is seen nearer the joint of the same surface. Outside of the area of congestion an anæmic line two lines wide is observable. The darker slough is said to be three weeks old. A smaller sphacelus is seen on the little finger. From the wrist almost to the elbow the arm is quite red. Pain is experienced in the finger-tips, and is excruciating at nights. The ends of the fingers are very painful on pressure. While taking the above notes, the entire hand to the wrist, in repeatedly succeeding waves, changed from the cyanotic hue to a deep pallor; the finger-tips alone remained blue. This pallor lasted five minutes, and then changed again to the original color. These changes take place four or five times a day, and the pallor continues from five to fifteen minutes. Accompanying them there is extreme pain in the tips of the fingers, but no throbbing. Sensation is not lost in any part of the hand except on the sloughs; impairment of the tactile sensibility is marked. There is no loss of power, and no change in the electrical reactions. The hand is extremely sensitive to the heat of the atmosphere, extreme pain being experienced in the middle of the day if exposed to the sun. When cyanotic, the sensation to the hand placed in cold water is of heat; in hot water the same sensation is felt; cold applications increase the pain. As previously noted, the pain is worse at night, keeping him from sleep, and is especially severe in the recumbent posture. There is no atrophy of the arm or hand, no œdema. The pulse in the radial is absent, and pulsation can scarcely be felt in the brachial and axil-

lary arteries. The nails grow, but the patient is unable to cut them, on account of pain.

His general health is good. He sleeps poorly, on account of the pain, but there are no cerebral symptoms. Vision normal, eye-ground healthy, pupils dilated but movable. His appetite has been poor for the past seven weeks, digestion good, and bowels regular. The heart is normal and free from palpitation. The urine is light in color, normal in quantity, acid in reaction, and free from albumen and sugar, but contains some urates.

July 16. Daily applications of the faradic current have been used, morphia taken at night, and $\frac{1}{100}$ of a grain of nitro-glycerin three times daily. The electricity relieves the pain, and the cyanosis is not so great, save in the index-finger, which is more blue. No increase in size of sloughs; fingers are shrunken so that the skin can be pinched in folds from the tip to the first joint. Local syncope occurs much more frequently and continues much longer; instead of five times, it takes place twenty-five times in the twenty-four hours. After pressure the capillaries do not fill so quickly as before. The pallor is of a different shade; instead of dead white, it is now yellowish-green, not unlike the yellow tinge after a bruise. Pain is complained of, especially on the radial side of the middle finger and on the opposite side of the index-finger. The middle phalangeal joint of the index-finger is more painful than formerly. The hand is stiff; the grip is not so strong as it was.

July 21. Shrivelling of the extremities of the index- and ring-fingers is noticed, and hence the epidermis is loose. The ring-finger is free from asphyxia; the middle finger is improved; the index-finger is blue-black, the color not changed by pressure. Pain and tenderness of the second phalangeal joint of that finger continue. On the radial side of the second joint of the middle finger a slough is forming. Index-finger still quite stiff; thumb asphyxiated, but not shrivelled. Pain continues; heat of sun increases its intensity, and hence he remains in the house during the day. The solar heat turns the hand purple, he says. The loose epidermis is insensible, but firm pressure causes pain in the finger-tips.

July 24. Since the last note an improved and marked change has taken place. The hand does not turn pale as often as it did, and its general warmth is increased, but the redness continues. The second joint of the index-finger remains swollen and tender, and the ecchymosis on its surface remains. On the finger-tips the most marked change is seen. The palmar surface of the last phalanx of the index-finger is pale and hard as if dead, and on its centre the brown ecchymosis is seen. The asphyxia has deepened very much on all the fingers, and the pain and tenderness are increased. About over the first joint of the index-finger a line of demarcation is beginning to form.

July 26. A thin, brown fluid has been oozing through small orifices in the raised and redundant skin of the index-finger. This epidermis has become brown. Lymphangitis to the elbow from the index-finger is observed.

July 29. Lymphangitis has subsided, the discharge of ichor ceased, and the formerly loose epiderm has become intimately adherent to the finger, which is dry, hard, and insensible from the tip to three lines from the first joint anteriorly, and at the sides to the root of the nail. The gangrene extends under the nail; the nail is black, and from the root of it to the palm the skin is asphyxiated. The fingers remain stiff, the skin of the thumb is hard, and a little purpuric spot is seen on the tip. Similar spots are seen on the dorsal surface of the middle finger, as previously described. The asphyxia of the middle finger is less, but the second joint is painful, and purplish on its surface. At the root of the nail a small slough is forming. On the palmar surface of the first phalanx of the little finger a dark-brown and loosened cuticle is seen; it is a little tender. Pallor has not been observed for two days; hand not as cold as formerly.

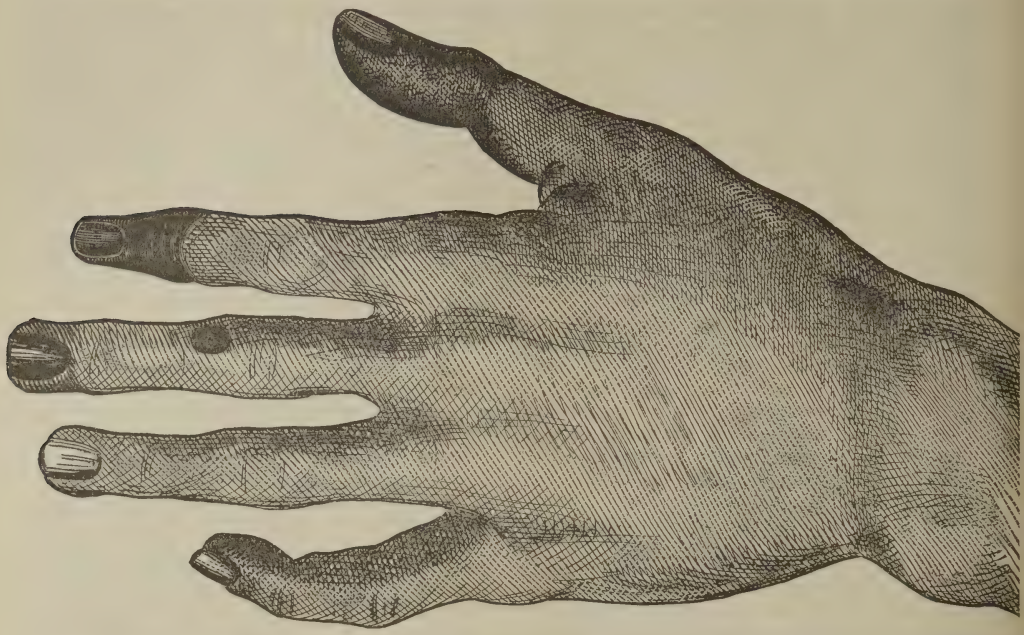
August 1. The gangrene has extended a little below the first articulation on the palmar surface of the index-finger, and around the finger to one-eighth of an inch below the root of the nail; the nail is very black; a line is forming, and the finger is offensive. The fingers pain if the hand is held up.

August 12. The dry gangrene has continued to extend on both surfaces of the finger to the first phalanx; the remainder of the finger is much swollen and indurated; sloughs on the palmar tip of middle and ring fingers continue, and the ecchymosis continues around the nail on the palmar surface. The subcuticular parts have atrophied so that the cuticle covers it like a shell; same condition, though not so marked, on the thumb and little finger. The nails have grown, but as yet he has been unable to cut them, on account of the severe pain.

August 16. Line of demarcation forming; the finger still blackened.

August 21. Index-finger thickened and swollen; gangrene now extends to the bone. Epidermis is still raised over the tip of the middle finger, which is hard and painless, and probably underneath new skin has formed. Thumb side of index-finger is very black along the nail; tip of little finger still red; the general cyanotic hue of the remainder of the hand has almost entirely disappeared; instead thereof there is an irregular mottling. The temperature of the hand is below normal, but not as cold as formerly.

August 24. After a complete line of demarcation had formed, Dr. Dulles removed the affected tip. The removal of the gangrenous



The figure shows the extent of the gangrene of the forefinger. The outer dark spots represent the various small sphaceli; July 29.

portion served to free the patient from pain, on account of which he was enabled to sleep at night in the recumbent posture. Succeeding the operation the cyanosis of the entire hand disappeared entirely.

September 15. Dr. Dulles had found it necessary to remove not only the dead portion, but also a small portion of the living tissue. The stump healed kindly, and the patient has just returned to his work.

January 11, 1886. It was noted that the nails grew but slightly while the patient was under observation. It is now seen that their nutrition had been seriously interfered with, the structure that grew then being different from the portion towards the end or the new healthy portion at the matrix. The diseased portion, seen on all fingers except the ring-, is from one-eighth to one-fourth of an inch long, slightly discolored, friable, and rough, and on a lower plane than the older and newer portion, due probably to the antecedent shrinking of the finger-ends. The hand to the wrist is very red, and the vessels are emptied readily by pressure. The right hand is also quite red, but not so markedly as the left. The pulse has returned, but feebly, in the radial and brachial. He suffers some pain along the vessel. The hand in a warm room is of the same temperature as the right, but on exposure it becomes cold more quickly, and with more suffering.

Remarks.—The suddenness of the onset of the symptoms in this case, with the absence of pulse in the radial, brachial, or subclavian artery, appears to show that primarily, at least, there was an arterial thrombosis. The origin of it is obscure. It is possible that an arteritis had been set up by the blow in the hand, or even by cold (ice), and the thrombus developed secondarily. Dr. Piersol very kindly examined a portion of the healthy tissue that had been removed, and reports that he could find only small vessels filled with clotted blood, but without inflamed walls. Recently J. H. has reported, complaining of pain behind the clavicle. There is no disease in the axilla, and nothing to account for a thrombus. It is, therefore, impossible to find the cause of the vessel-obliteration. There is one case alone, of many cases of symmetrical gangrene reported, in which a large vessel did not pulsate. I hesitated, therefore, to account for the absence of pulsation by arterial spasm alone, and yet it would not be unreasonable, for, as we can have abnormal pulsation of a vascular trunk, so can we have abnormal spasm.

As hinted in the beginning, in all probability the gangrene was due to the vessel-obliteration, intensified, however, by the occurrence of local asphyxia. If the obliteration of the vessel be due to causes

other than spasm, the phenomena of syncope and asphyxia from capillary spasm can be explained by invoking reflex action; that is, the clot in the vessel or the source of the clot in the thorax acts as an irritant to peripheral vaso-motor nerves through the "pressor" fibres, causing reflex capillary spasm.

A neuritis, on the other hand, may be conceived as the cause of the vascular and nutritive changes. Yet the absence of paralyses and atrophies, and the electrical reactions, together with the result of the case, would point to functional rather than organic nerve-lesion.

NOTE.—*History.* In addition to the complete bibliography of Dana and the references in the text, the following are worthy of study. E. L. Fox, on The Sympathetic Nerve, etc., has a most admirable and exhaustive account of this affection, and quotes some interesting observations of McIntyre and others. A list of authors and reported cases are given. They will be excluded from this list. Ross, Wilkes, and other works on the nervous system may be consulted. One of the earliest and best cases recorded is by A. S. Myrtle, M.D., in the *Lancet*, 1863, i. p. 602, entitled a case of "Anæmic Sphacelus." The books of Woakes on Deafness, Giddiness, etc., and on Post-nasal Catarrh, can be read in this connection with interest.

BERNSTEIN. London Medical Record, 1855, ii. p. 337, from Proceedings of Odessa Medical Society, No. xii. p. 175, 1884.

BREHIER. Quelques considérations sur l'asphyxie locale. Paris, 1884.

FOULQUIER. Considérations sur l'asphyxie locale. Paris, 1874.

THEZE. Quelques considérations sur un cas d'asphyxie locale des extrémités. Paris, 1872.

MARRION. Gazette médicale d'Orient. Constantinople, 1869.

SALVIR and MUCKLEN. Annales de dermat. et syph. Paris, 1862, 2 s., iii. 357. Eczema with local syncope.

ENGLISCH. Wien. Med. Presse, xix. 35–41.

LANDRY. Mémoire de l'Académie de Médecine. Paris, 1855.

In addition to the contributions of Mitchell, Mills, McBride, Hamilton, Warren, and others, the following are of interest:

GRAYBILL. Case of symmetrical spontaneous gangrene. Virginia Medical Monthly, 1881, 2, viii. 355.

STEWART and HOLDEN. Chicago Medical Journal and Examiner, 1878, xxxviii. 587.

ANCRUM, J. L. Case of symmetrical gangrene, etc. Charlestown Medical Journal and Review, 1876, iii. 275–281.

FRY, F. R. Raynaud's disease. The Journal of Nervous and Mental Diseases, January, 1886.

DANIEL, W. E. Spontaneous gangrene of both feet. Lancet, 1857, i. 425.

CRISP. British Medical Journal, 1883, i. 572. Spontaneous gangrene, no pulsation in tibial.

Gazette médicale d'Orient. Constantinople, 1880–81, xxxiii. 36.

LANCEREAUX, E. "Des troubles vaso-moteurs et trophiques liés à l'alcoöliques et à quelques autres intoxications chroniques, etc." This author observed, among other vaso-motor disorders in alcoholic paralysis, local asphyxia and gangrene of the extremities. In his dissections he found the spinal cord healthy, but decided evidences of a peripheral neuritis.

II.—GANGRENE COMPLICATING DIABETES.

In a few words, if only from association with the preceding, this case merits slight attention. Cases of Raynaud's disease have occurred in the course of diabetes. This is a case of simple dry gangrene, without vascular phenomena, however, and indicates how a slight injury may be productive of serious results in a diabetic.

The portions before you are the last two phalanges of the little finger. The patient, a female, aged 35, has been under observation five years. Six weeks ago she received a slight cut at the second joint of the finger. It bled a little, was painless, and soon forgotten. A duskiness was observed around it a few days after, and extended to the tip. At the same time the phenomena of dry gangrene presented themselves, and after a long time the line of demarcation had so completely formed as to permit the snipping of the ligaments about the joint to remove the mass. A slight lymphangitis had developed, and now the stump and adjacent structures of the hands are infiltrated.

REPORT ON THE PROGRESS OF PATHOLOGY.

BY J. H. MUSSER, M.D.

FURTHER RESEARCHES ON CHOLERA.

KOCH (*British Medical Journal*, January 2 and 9), in a speech at the second conference on cholera, reviews the bacteria question, and presents some new facts relating to cholera-bacteria and its pathogenic properties.

After calling attention to his discovery of the comma-bacillus and his conclusions as to its etiological relation to cholera, he first attempts to answer the mycologists who have objected to his convictions.

First among them were Finkler and Prior, who claimed that a micro-organism could be found in cholera nostras which could not be distinguished from the cholera-bacteria of the speaker. Koch proceeds to demonstrate that a radical difference exists not only in their mode of growth, but in their properties. As the cholera-bacillus develops, an air-bubble appearance is seen at the oldest end of the thread, when cultivated on gelatin, which is not seen when the so-called bacillus of cholera nostras is cultivated under exactly similar conditions,—on gelatin of the same concentration and at the same temperature. When grown on boiled potatoes they behave differently; the cholera-bacteria do not develop at all on potatoes at the ordinary temperature, while Finkler's bacteria grow luxuriantly. Further, the products of the decomposition of the two are also different: Finkler's bacteria have a "stinking smell," the cholera-bacilli have a peculiar aromatic odor.

Moreover, Koch, in common with Van Ermengen, Watson Cheyne, Biedort, and others, was unable to find in cholera nostras bacteria which were the same as the cholera-bacteria or Finkler's organisms, while he states that Finkler found them only in the evacuations that had undergone putrefaction ("stood fourteen days").

Klein is another able morphologist who at one time combated Koch's views. He has since withdrawn his objections, however, but nevertheless Koch quotes them and criticises them. Klein opposed Koch because he believed the micro-organisms of glanders and the cholera-bacilli were the same: (1) because the cholera-bacilli were in reality spirilla; (2) because similar bacteria are found in the deposits on the teeth of healthy men and in the stools of patients who had diarrhœa, phthisis, or dysentery; (3) because they are found only in small numbers in persons dying of cholera; and (4) because they are killed by weak acids. Under the lash of severe and able criticism by Watson Cheyne, Klein was compelled to withdraw most of the above assertions, and to come finally to the same conclusions as Koch,—namely, that the cholera-bacteria are a specific variety and seen exclusively in cholera.

Emmerich, also, had attained results in Naples that differed from Koch's. He found a peculiar form of bacteria, which he holds is specific in the blood and internal organs of cholera patients. The true cholera-bacillus he did not find in all cases, however, and hence did not regard it as specific. Koch points out that Emmerich's investigations were conducted with old blood and stale organs. Ceci, in Genoa, however, went over the same ground, with proper precautions, without securing similar results. To the statement of Emmerich that he was able to produce effects on animals corresponding to Asiatic cholera with his bacteria, Koch answers that with various bacteria choleraic symptoms can be produced in animals, and that the bacteria isolated by Brieger from human fæces produce symptoms similar to those described by Emmerich.

After meeting his critics in a scientific spirit, Koch insists upon the truth of his original propositions because of the large array of scientists who have confirmed his work, and points especially to the investigations of Nicati and Rietsch and Van Ermengen in Marseilles, Buber, Cheyne, and Pfeiffer in Paris, Ceci, Escherich, Armanni, and Fede in Italy, and to Schottelius and others. This latter worker demonstrated that the statements of Klebs —that the comma-bacillus could be found in pneumonia—were wrong.

Further, to show that the cholera-bacteria occurs only in cholera, he exhibited cultivations from different sources,—Marseilles, Paris, and Italy. There was no difference in the appearances or properties of the various cultures.

In the second part of his speech Koch relates the new researches in cholera carried on by himself in conjunction with Drs. Weisser and Trank. The advance in our knowledge of cholera during the past year has been along the line of animal investigation. The great objection to the "specific" theory of Koch has been that cholera could not be produced by the inoculation of animals with the bacteria. By close scientific reasoning and most accurate investigation, he has found the reason for this lapse in the bacillary theory. The experiments were on guinea-pigs. It was thought that infection of animals could occur only if bile were prevented from flowing. After ligaturing the ducts, however, the injection of noxious material produced the same results as when injected without ligation: in neither instance were the inoculations successful. It had

been well known that the ingestion of the material in the stomach did not produce any choleraic symptoms because the gastric acid killed the bacilli. The injection of comma-bacilli into the duodenum of animals produced results analogous, but corresponding only very slightly, to the natural process of infection. By an extended series of experiments to find out the natural process of digestion and the time occupied in the passage of food from the stomach to the cæcum, Koch found it passed the stomach and small intestine surprisingly quickly. When the pathogenic bacteria were introduced as food, therefore, they were either killed in the stomach or hurried along through it and the small intestine too rapidly to admit of absorption, to arrive in the cæcum only to be killed there by its acid contents. The acidity of the stomach and the peristaltic action of the small intestine had to be overcome to insure success. And this was done, after much experiment, by introducing a soda-solution and the cholera-cultivation simultaneously and subsequently injecting tincture of opium. Thirty-five guinea-pigs were experimented on in this way; of these, thirty died of the cholera. Alcohol, administered in place of opium, was also found to inhibit peristalsis. Attempts were made in other ways to set up in the intestine conditions suitable for the development of cholera-bacteria: as by the administration of castor oil and croton oil by the mouth to set up an intestinal catarrh, or by the injection into the peritoneal cavity of turpentine, iodine, glycerin, alcohol, etc., with successful results only in a few instances.

Now, Koch believes cholera-infection is produced in man because the conditions are like the artificial conditions in the guinea-pig. The contents of the stomach are as likely to be alkaline or neutral as acid, and the intestinal peristalsis as inactive as in the narcotized animal. A certain conception is thus obtained as to the mode of infection, and Koch believes that by further experiment much of the process that is yet dark may be cleared up and the effects of medicines on the cholera-process determined.

Regarding the theory of production of ptomaines from the cholera-bacilli, which are absorbed and act on the organism as a whole, Koch desires to investigate it further. Many other interesting features were fully developed. Space permits us to state them only very briefly. He found that the infective material can be carried successfully from one animal to another. Elaborate experiments were made in regard to the resisting power and vitality of the cholera-bacilli. Their vitality is of short duration. Death of the cholera-bacilli in the dry state takes place with striking rapidity, while in clothing, etc., in the moist state they lived only three days. A five-per-cent. solution of carbolic acid killed them in a few minutes, and he pronounces it the best disinfectant.

Bochefontaine and others swallowed cholera dejecta in the form of pills without infection. Koch believes this negative result was due to the acid in the stomach at the time of digestion.

The resting-stage of the cholera-bacteria is next discussed. Koch does not believe it has been found, nor that it exists, notwithstanding the experiments of Ceci; yet he states that one can conceive that in the superficial layers of the ground, in swamps, etc., conditions may exist in which the cholera-bacilli may be preserved for five months or even longer.

Finally, Koch relates a case of cholera which developed in his own laboratory from contact of the person infected, with his cultivations.

(To be continued.)

NOTE ON THE TREATMENT OF KELOID AND HYPERTROPHIED SCARS BY ELECTROLYSIS.

BY W. A. HARDAWAY, A.M., M.D.,
Professor of Diseases of the Skin in the St. Louis Post-Graduate School of Medicine.

IN a paper read before the Missouri State Medical Society in May, 1883,* on the general subject of electricity in dermatology, I mentioned the fact that I had employed electrolysis in the treatment of hypertrophied scars, and further suggested its use for true keloid.

My first experience was gained in the following manner. A lady who consulted me about the removal of superfluous hairs exhibited a large number of irregular hypertrophied scars on the skin, which she said had been produced by caustic injections in or near the hair-follicle in a

* Published in the St. Louis Courier of Medicine, June, 1883.

futile endeavor to remove the hirsute growths. As may be imagined, the hairs were twisted and tortuous, and in attempting their removal the electrolytic needle was plunged in and about the distorted follicles, thus acting very freely upon the scar-tissue. Of course I was merely endeavoring to destroy the hair-papillæ, and had no idea of effecting anything further. Therefore great was my astonishment, as the treatment progressed, to discover that the hypertrophied scars were being smoothed out,—in fact, they finally became flat.

The next case was that of a young lady who had an elevated radiating scar upon her forehead, the result of an electro-cauterization for the removal of a port-wine mark. In this instance I attacked the cicatrix intentionally with the hope of reducing it.

In a paper read before the American Dermatological Association August 27, 1885,* on the "Treatment of Port-Wine Mark by Electrolysis," I have recorded this particular case, and there state that "I attacked the elevated cicatrix produced by the galvano-cautery, and, as I had observed before in other hypertrophied scars, the effect has been striking as regards smoothing down the scar."

Several times in the past six or seven years I have begun electrolytic operations on true keloids; but, as the cases have always been in the persons of dispensary patients, no one of them has remained long enough under observation to enable me to form any opinion of the results.

Two years ago a physician of this city sent his daughter, a lady of 30, to me for treatment of a keloid. The growth was situated on the chest, on the right side, and about two inches below the clavicle. It had followed upon the extirpation of a bean-sized mole, and, although at first quite small, had grown to the circumference of a silver half-dollar and was a quarter of an inch in height. The subjective symptoms were very annoying, the growth being the seat of constant sensations of pain and burning.

I operated on the growth a number of times by multiple punctures with the electrolytic needle, sometimes tattooing, as it were, the surface, and at other times running the needle in various directions through the base.

After a number of visits, this patient also disappeared, but within the past week she called on me again to show the result. She stated that after discontinuing her visits, which she did because the operations were quite painful, she noticed that the keloidal tumor began to shrink, and that at the same time the various annoying symptoms appreciably lessened and finally subsided altogether. She soon ceased paying any attention to the growth, and of its further progress up to the time of exhibiting it to me she had made no notes.

When I inspected the tumor I was delighted to find that in the place of an elevated keloid there was left only a smooth, white scar, very slightly raised above the level of the skin.†

It is just possible that this keloid and the hypertrophied scars may have spontaneously disappeared; but I am so strongly inclined to the belief that the results obtained were the result of the treatment employed that I have been encouraged to place these notes before the profession.

* St. Louis Courier of Medicine, March, 1886.

† According to the accepted classification, this growth must be regarded as a so-called false, or cicatricial, keloid; but, admitting the propriety of the distinction between this and the spontaneous variety, it is quite likely that the treatment employed for one would be equally applicable to the other.

TRANSLATIONS.

On Radial Paralysis from Compression.—MM. Déjerine and Vulpian have studied radial paralysis from compression. This form of paralysis generally lasts five or six minutes. The susceptibility of the nerve to stimulation varies in different parts. Below the part compressed its excitability is not lessened, but rather slightly exaggerated, by an electric current. Above the part compressed the current does not increase its excitability. Muscular nutrition is not affected, except that the long supinator muscle becomes atrophied, and this muscle does not contract under the influence of a galvanic or faradic current. There is also an evident tendency to nerve-degeneration, probably due to the superficial portion of the radial branch innervating the muscle, which is thus more susceptible to compression. Patients suffering from paralysis from compression exhibit disturbed subjective sensibility. If the radial nerve is stimulated above the part compressed, the patient does not, as is usual, indicate painful sensations at the periphery. These notes were taken from

five cases of radial paralysis from compression, one occurring during an attack of epilepsy, three from compression during sleep, and one from an injury to the arm. M. Déjerine believed that the lesions of radial paralysis are not so limited as is supposed, and tried to produce the same condition in animals. He isolated the sciatic nerve and compressed it with pincers, but the results were unsatisfactory. The compression was either too intense or not sufficiently so: therefore the symptoms were either those of peripheral paralysis, atrophy, degeneration, or absence of results.

M. Brown-Séquard was present at the meeting of the Biological Society when this paper was read, and he said that he did not believe that radial paralysis presents any lesions, but is due to peripheral stimulation, which has an inhibitory influence on the cord. Probably, necropsies would not give any clue: it is a question of purely dynamic phenomena. Nevertheless, after a certain time inhibition produces alteration. M. Déjerine would have done better, M. Brown-Séquard believed, to have produced radial paralysis with the nerve kept in its normal surroundings, and not exposed.

On Thermic Stimulation of the Brain.—Dr. Eugène Dupuy, at a recent meeting of the Biological Society, stated that, ten years ago, M. Brown-Séquard showed to the Paris Biological Society a dog in which he had burned the frontal and parietal convolutions with red-hot irons. This animal exhibited, besides interesting vaso-motor symptoms, very pronounced paraplegia, suggesting meningeal myelitis rather than a central lesion, which actually existed. Dr. Ferrier some years ago showed at a London medical society a monkey with those convolutions destroyed which he believed contained the psycho-motor centres of one side of the body. This monkey had the right fore-limb of the opposite side contracted. At the necropsy some months later on, it was observed that there was degeneration of the pyramidal fibres on the side corresponding to the cortical lesion. This degeneration began at the decussation of the pyramids, and invaded the two lateral columns of the spinal cord; but on the left side, the one corresponding to the cortical lesion, the lesion did not extend lower than the cervical region.

M. Babinsky has recently published notes of a case observed at the Salpêtrière in which degeneration resulting from an area of softened brain-tissue in the antrum ovale sinuses invaded the right and left sides of the cord. There was muscular atrophy, but no lesion of the medullary cells nor of the roots. M. Dupuy states that three dogs in which he had destroyed with red-hot irons the cortical substance reputed to contain the psycho-motor and psycho-sensory centres died between three and five days after exhibiting symptoms which he had never observed to follow any other means of destroying convolutions. These animals were thrown into a prostrate condition from the onset of the operation. They rejected the smallest quantity of milk. At the necropsy the cerebral substance in the two hemispheres comprised between the seat of the lesions and the decussations of the pyramids appeared normal to the naked eye, but the cord below the pyramids was completely disorganized, just as though there had been extensive capillary hemorrhage which had reduced the cord to pulp.

A Micrococcus in Corneal Granulations.—At a recent meeting of the Paris Surgical Society, M. Poncet stated that the microbes of the corneal granulations were studied in 1881 by Sattler. M. Poncet detected in an eye enucleated by M. Dehenne the presence of a micrococcus in the interior and exterior of the granular cells. This investigator also found it in the membrane of Descemet, and also in the iris. M. Poncet considers it possible that the microbes had penetrated into the anterior chamber in consequence of an incision, since iridectomy had evidently been performed. Indications of it were also evident in sections of the eye. M. Poncet showed drawings to the Society representing the position of the microbe in the granulations. Sattler's statement that the micrococcus is analogous to that of gonorrhœa M. Poncet considers erroneous, and asserts that it is much larger.

Calomel as a Diuretic in Œdema.—In a case of extreme dropsy, Jendrassik, of Buda-Pesth, found that calomel in small doses (Gr. 0.2), repeated from three to five times a day, produced profuse diuresis, commencing on the second day.—*Deutsche Med. Zeitung*, No. 37, 1886.

PHILADELPHIA

MEDICAL TIMES.

PHILADELPHIA, MAY 29, 1886.

EDITORIAL.

THE COUNTY MEDICAL SOCIETY DELEGATES.

A SPECIAL meeting of the Philadelphia County Medical Society was held on the 18th instant, in order to receive the reports of the delegates of the Society to the recent meeting of the American Medical Association. A report signed by a majority of the delegates from the Society in attendance upon the meeting at St. Louis was read, adopted, and ordered to be printed and distributed to the members of the State Medical Society and the American Medical Association. Resolutions reaffirming the legality of the election, and declaring that the Judicial Council in excluding the Society's delegates acted in violation of the common rules of evidence and justice, were offered and adopted at the same meeting.

A statement signed by two other members of the delegation was also submitted; but the Society refused to accept it or acknowledge it as a minority report. This report has been put in our hands; but, inasmuch as the same question as that which caused contention at St. Louis will be likely to come up before the Judicial Council of the State Medical Society for serious consideration next week, we prefer not to publish it, and forbear comment upon it at present. We regret deeply that a division has been caused in the County Medical Society upon a mere question of medical politics, and hope that both parties will now forget their differences and devote themselves to the legitimate scientific work of the Society.

THE FIRST SANITARY CONFERENCE OF THE STATE BOARD OF HEALTH.

MUCH credit is due to Dr. Joseph F. Edwards, chairman of the Committee of Arrangements, and to his coadjutors, Drs. Pemberton Dudley and Benjamin Lee, for the successful management of the recent Sanitary Conference held in this city under the auspices of the State Board of Health. An invitation extended to other Health Boards to participate in the work of the session was quite generally accepted, and representative delegates were present from all parts of the country. The Maryland State Board, as a compliment, came over in a body.

An opportunity was afforded in the meetings, which extended over three days, for an expression of opinion on matters relating to the public health and the discussion of methods looking towards an advancement in the sanitary condition of the Commonwealth, the prevention of sickness and avoidable death, and the improvement of the conditions of living.

Although the actual numbers in attendance upon the meetings were small, yet, thanks to the strong support given by the daily press, abstracts of the papers and discussions were published daily, and thus reached the homes of the people. We believe that this Convention has done good; but we cheerfully acknowledge that the good that it has done has been accomplished chiefly through the publicity given to its proceedings by an intelligent and independent press. Arrangements, it is believed, will soon be made to preserve in permanent form the papers which were read at the conference.

THE NUTRITIVE VALUE OF CONCENTRATED BEEF PREPARATIONS.

IN a recent communication to the College of Physicians by Dr. Thomas J. Mays, of this city, were reported the re-

sults of an experimental research into the nutritive value of a number of specimens of beef-extracts found in the market. The experiments were made upon the isolated frog's heart, and seemed to show that, contrary to the opinion held by nearly all physiologists, these preparations contained considerable material available for purposes of nutrition; but the experiments also showed that the "force-value" of these foods was much less than that contained in milk or in a two-per-cent. solution of dried bullock's blood, which were used for comparison.

So far as these experiments prove anything, they may be accepted as showing that beef-extracts possess some nutritive properties,—which has never been denied. They fail to show, however, that these preparations are especially desirable as food; and upon this point clinical experience is on the side of the majority of physiologists.

While the results of experiments upon the lower animals are often valuable guides to the physician, it is possible to rely too much upon what has been happily termed "bull-dog and bull-frog physiology." Exact knowledge of dietetics is very desirable, but will hardly be reached through observations made under such abnormal conditions as those which furnished Dr. Mays with his deductions.

Beef-extract and beef-juice usually contain only traces of proteids, the greater portion of albuminoid substances remaining in the solid portions of the meat, which contains nearly all the nutritive materials. The extraction of the salts and extractives, by either boiling or expression, destroys in a great measure the sapidity of the meat, but does not diminish its digestibility or its usefulness as nutriment.

Förster and Rijnders, in experiments upon man, have shown that meat from which the salts and extractives had been removed was digested and absorbed as readily as roast meat.

The experiments of Dr. Mays are calculated to support the fallacy, so widely current in and out of the profession, that beef-tea, beef-juice, or beef-extract may be safely used as a substitute for the meat in substance. The teaching of all recent physiology is exactly to the contrary.

BRONCHIAL ASTHMA AS A REFLEX SYMPTOM OF NASAL DISEASE.

THE recent observations of E. Cresswell Baber, M.B. (*British Medical Journal*), on the congestive theory of asthma, from prolonged study of the nasal mucous membrane during life, seem to support the view that the bronchial mucous membrane may undergo temporary swelling similar to that which occurs in morbid states of the nasal mucous membrane, though decidedly less in degree. The nasal respiratory mucous membrane consists of a large tract of spongy tissue situated chiefly on the inferior turbinated bones. This membrane contains numerous large venous vessels, by the distention of which erection or congestion of these bodies occurs. Within certain limits this is a normal process, but when excessive it is capable of exciting neurotic asthmatic attacks, accompanied by sneezing and serous secretion, quite independently of hay-fever. The symptoms above described may be accompanied by any of the reflex phenomena known to be associated with the nose,—viz., cough, asthma, redness and itching on outside of the nose, nightmare, migraine, constant headache, supra-orbital neuralgia, giddiness, and epilepsy. According to this view, hay-fever is simply a neurosis of the nasal mucous membrane, accompanied by its reflex phenomena, and produced by the pollen of plants or other irritant, in persons specially predisposed to it. The neurotic attacks are caused by some local excitant in the nasal cavities, such as polypi or inhaled foreign bodies, the constitution of the patient always being an important factor.

Further proof of the intimate relationship which exists between the bronchial and nasal mucous membranes is offered by Hack, who reports a case where asthma was produced by the galvanic cautery being applied to the nasal mucous membrane, the patient never having had asthma before. It is also a fact that bronchial asthma has been frequently relieved and sometimes cured by treatment of the nasal cavities.

THE NATIONAL HEALTH BOARD.

FROM the Annual Report of the National Board of Health for 1885, which has just been issued, we observe that, although crippled by want of means to prosecute its labors, the Board has not been idle. Though unable to participate actively in the work of protection against cholera and smallpox, it has fulfilled its duty and rendered real service in warning and advising, as required by its constituting act. Health-officers will find in the papers appended to the report, in a compact form, useful information with regard to the literature of cholera-prevention for the year 1885, and also valuable statistics of mortality from towns and cities representing in the aggregate a population of ten millions.

We have learned that a bill has been favorably reported by the Committee on Commerce to the national House of Representatives, which contemplates the abolition of the Board and the substitution for it of a Health Bureau in charge of a Sanitary Director. In such an important change as this the medical profession everywhere throughout the country is interested, and the prospect of an early visitation of Asiatic cholera emphasizes the propriety of obtaining a decided expression of its opinion upon this question. A deliberative body like the present Board, which in presenting the results of experience can suggest and direct the labors of the health-officers in the various States, may prove to be far more practicable than a single federal officer at the head of a Bureau of Health. The latter, at all events, is an untried experiment, whereas the work and constitution of the Board of Health have been approved by such representative bodies of the profession as the American Public Health Association, the Sanitary Council of the Mississippi Valley, various State Boards of Health, and many Medical Societies, including the College of Physicians of Philadelphia and the New York Academy of Medicine. Congress should, at all events, make proper appropriations for sanitary work under existing laws, in order thoroughly and fairly to test the working of the present organization before superseding it by another which may be more expensive and less efficient.

AN UNFORTUNATE COMPARISON.

DR. DAVID L. YANDELL, in one of his letters to Dr. Wathen, published in the *Medical Bulletin*, April, 1886, makes the assertion that "Eastern men are less ready than men are with us to shoulder what may become an unpleasant responsibility."

It appears to an unprejudiced observer that Dr. Yandell's actions contradict his own statement, which we can only excuse upon the ground that it was evidently not intended for publication.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION during the past week has held a very pleasant and we hope profitable session in Philadelphia, at its Eighth Annual Congress, at the Hall of the College of Physicians. Morning and afternoon sessions were held, which were well attended, and the papers and discussions were fully up to the high standard of previous meetings. A reception was given by the President, Dr. Harrison Allen, at his house, May 27, and last evening the annual dinner was given at the St. George Hotel. The exercises will terminate with a carriage-excursion this afternoon.

NOTES FROM SPECIAL CORRESPONDENTS.

NEW ORLEANS.

THE feature of greatest medical interest in New Orleans is the Charity Hospital, located on Common Street, within ten minutes' walk of the business centre of the city. The hospital was founded in the year 1786, although the present building was not erected until 1832. In the main hall of the hospital a marble tablet commemorates the foundation, as follows:

THE
CHARITY HOSPITAL
OF LOUISIANA
WAS FOUNDED IN THE YEAR 1786
BY
DON ANDRES ALMONASTER Y ROXAS,

To whose generous endowment, the munificence of the Legislature of this State, and the liberality of the

STATE OF PENNSYLVANIA,

The community is indebted for the means of erecting this edifice, built in the year

MDCCCXXXII,

His Excellency A. B. Roman being Governor and Ex-Officio President of the Institution.

To record which, and inscribe hereon the names and contributions of its distinguished benefactors,

THIS TABLET HAS BEEN ERECTED.

Etienne Boré	$1,000.00
Robert Cune	1,000,00
Julian Poydras, Real Estate Estimated	35,000.00
Nancy Davenport	500.00
James E. North	
Eugene McCarthy	600.00
R. G. Taylor	523.50
Charles Schmidt	500.00
John Burnside	10,000.00
Stephen Henderson, Cotton Press property Estimated	45,000.00
R. Y. Charmbury	1,000.00

Mrs. Cora Livingston Barton, who died some years ago, left to the Hospital the sum of six thousand dollars, to be paid out of a fund to be derived from the sale of the property No. 751 Broadway, New York, upon the death of Julia Barton Hunt and the Hon. Carleton Hunt, who, in the mean time, have the usufruct of said property.

The hospital is built upon the block-plan, the buildings occupying a large square, surrounding an open court, and connected by corridors. The south end of the block is of recent construction, but is built upon the same general plan; the buildings are three stories in height. A dead-house, separate from the hospital, has recently been built; this is two stories high, the first being occupied as a morgue and autopsy-room; there are also rooms to receive the bodies of those claimed by friends, and where services can be held prior to burial. The upper floor is used as a pathological laboratory by Dr. H. D. Schmidt, the pathologist to the hospital. The board of administrators has been liberal in furnishing to Dr. Schmidt facilities for the pursuit of his work, and an excellent museum of gross and microscopic pathology is growing up. The venerable director of the laboratory is enthusiastic in his work, and, although almost entirely helpless from the effects of the rheumatism which has been his life-long foe, his brain is as active as ever. Dr. Schmidt's gross and microscopic sections of the brain and other nervous tissues are the admiration of both anatomical and neurological specialists. Although in the vicinity of threescore years, with whitened hair and beard, totally unable to walk or move his fingers, and with but a limited range of motion in his elbows, he has now in contemplation an original work upon the histology and topographical anatomy of the nervous system, illustrated on stone by his own hand from nature. It is hoped he will be spared to finish this great work. Dr. Schmidt's eminent qualifications for such a work will make its success certain from the scientific and artistic points of view; the profession owes it to itself to make it a pecuniary success likewise. Dr. Schmidt has also written several monographs upon pulmonary pathology which will soon be published.

The daily average of patients in the hospital during the past year was six hundred and five, the total number of admissions during the year six thousand one hundred and forty-three, and the total number of deaths one thousand and five,—a death-rate of fourteen per cent. In addition, there were thirteen thousand five hundred and eighty-five patients treated in the out-patient department of the hospital. The total number of cases of malarial fever was nineteen hundred and forty-four, which was over one thousand less than were admitted in the preceding year.

Several cases of leprosy are now under treatment, and, according to the clinical records of the cases, are improving under the internal and external use of chaulmoogra oil.

Since the present hospital has been built, in 1832, four hundred and twenty thousand three hundred and eighty-one patients have been admitted, of which sixty-two thousand and twenty have died. This is exclusive of the year 1863, when the city was under the Butler *régime* and no report of the hospital was issued. The average death-rate for these fifty-three years is 14.75 per cent.

As stated in the memorial tablet above quoted, the present hospital was built in 1832, through the endowment of Don Andres Almonaster, the munificence of the Louisiana Legislature, and *the liberality of the State of Pennsylvania.*

The circumstances under which the Keystone State contributed to the building of a hospital so far beyond her borders were communicated to me by Dr. F. W. Parham, one of the house-surgeons.

About 1827 the Legislature of Pennsylvania voted a gift of ten thousand dollars to that charity, for the reason that many of the citi-

zens of this State engaged in the river-trade received its benefits. No other State bordering on the great internal water-way has ever contributed a dollar towards this hospital, although it is always open for the reception of the sick from everywhere. This makes the bounty of the Keystone State the more noticeable, and it is remembered with gratitude by the administrators of the institution.

The main support of the hospital at present is derived from the Louisiana State Lottery Company, which contributes forty thousand dollars per year to its income, and the Legislature of the State, which appropriates an average of forty-five thousand dollars per year for this purpose. There is, however, a considerable loss on the latter, owing to the large discount on Louisiana State warrants. Thus, in the last two years the discount amounted to twenty-seven per cent., equivalent to a total loss to the hospital of twenty-four thousand nine hundred dollars. The average annual expenditure for the maintenance of the hospital amounts to nearly a quarter of a million dollars.

The ambulance system of the hospital is very efficient, though only lately established. There are two wagons constructed with all the latest improvements for this service. The ambulance corps consists of fourteen resident students of the hospital. The wagons have right of way over all vehicles except those of the fire department and United States mail. The system of signalling to the stable-men, drivers, and ambulance-surgeons is perfect, and in from two to three minutes after the call is received at the hospital the ambulance is under way to the place where it is needed.

In 1884 the University of Louisiana received a large endowment from Mr. Paul Tulane, formerly of this city, but now a resident of Princeton, New Jersey. The medical department of the University has not benefited much from this endowment as yet, although the school is known as the Tulane University. The medical and surgical service of the Charity Hospital is in the hands of the faculty of the University, and thus excellent clinical material is at the disposal of the school.

A cremation society has recently been organized, of which Dr. Felix Formento, who wrote the article on "Cremation" in Wood's "Reference Hand-Book," is president. There are a number of ardent crematists in this city.

On the 10th of May the quarantine goes into effect at this port. Vessels are divided into four classes, according as they are infected, from infected ports, from suspicious ports, or from healthy ports. The quarantine is one of active disinfection and observation. Vessels and passengers are detained only long enough to permit of thorough disinfection or to allow the incubative period of the disease to which the vessel, its cargo, or passengers have been exposed to elapse. The disinfectants used are mercuric bichloride in solution or spray (one to one thousand) and sulphur dioxide. The sulphurous acid is forced into the hold under strong pressure, and permeates every nook and cranny of the vessel. All accessible parts are washed with bichloride solution; all baggage and bedding is likewise washed in the disinfectant. At the station are large disinfecting chambers, where the cargo can likewise be subjected to the action of germicide agents. A very large drying-apparatus has recently been added, which will enable the period of detention to be materially abbreviated.

The New Orleans quarantine is now admitted to be the most thorough and efficient in this country. If honestly administered, it should prove absolutely protective against the importation of infectious diseases. While the Louisiana State Board of Health, which controls the quarantine, remains unhampered by legislative restrictions, and commands the services of faithful officials, as at present, the Mississippi Valley need fear no importation of exotic disease.

Dr. Joseph Holt, who recently tendered his resignation as President of the Board, has been induced to reconsider his determination and remain in the service of the State in the same capacity. Last month Dr. L. F. Solomon, an active young sanitarian, was elected Secretary of the Board.

The failure of the yellow-fever commission bill to pass the national House of Representatives last week has caused much disappointment here.

G. H. R.

New Orleans, May 1, 1886.

NEW YORK.

At the stated meeting of the Academy of Medicine, held May 6, the President, Abraham Jacobi, M.D., in the chair, Dr. H. G. Piffard made an interesting demonstration with the stereopticon, chiefly from photographs of living subjects suffering from various skin-diseases. He had made use of this form of demonstration at his lectures at the University Medical College, and had found it to possess advantages over the presentation of photographs for inspection by the students, and even over the exhibition of the patients themselves, whom only the students seated near the arena had an opportunity to inspect closely. Some of the diseases illustrated were epithelioma, lupus, eczema, alopecia, favus, generalized melanosis, sarcoma, "barbers' itch," the eruptions of syphilis, of local poisoning, leprosy, elephantiasis. Sections of the nails, and of the skin in health and in disease, were also exhibited. Some of the photographs were taken by the author from patients while in his office, others were by different artists, and some were presented to him by specialists in this and other cities.

BALTIMORE.

A RECENT paper by Dr. W. T. Barnard, of Baltimore, entitled "The Relations of Railway Managers and Employés," contains interesting details of the organization and working of the Baltimore and Ohio Employés' Relief Association. The paper considers many points of sanitary and professional as well as of purely social and economic interest. The members of the Association, numbering now nearly twenty thousand, obtain medical attendance at a reduction from the usual charges. The Society's fee-bill, appended to the last annual report, shows that the charges for medical and surgical services are about half the usual fees charged by practitioners in good standing. Surgical services in cases of accident occurring in the performance of duty are paid for by the Association, and during the year 1885 the sum thus expended amounted to over fifty thousand dollars. The Association has a number of medical inspectors, employed at a regular salary, whose duties consist in investigating cases of disability, methods of treatment, the sanitary condition of cars, buildings, baggage, etc. They also examine into the physical condition of all applicants for admission into the company's service.

The Association has many interesting economic and social features, such as life-assurance, superannuation fund, savings-bank, circulating library, homestead fund, etc., to which we cannot refer here. The feature of most interest to physicians is the practical instruction in preventive medicine which the Association gives. Upon this point Dr. Barnard says, "The rigid sanitary supervision exercised by the Association through its medical inspectors over every portion of the line enables it to check and control many disorders before they have assumed grave proportions. Thus, some years ago, when smallpox was prevalent at many points tapped by the Baltimore and Ohio system, over twelve thousand employés (and, in dangerous localities, their immediate families) were vaccinated by the medical inspectors at Association expense; and, though many employés were greatly exposed to contagion, less than a dozen were affected, and but two died from the disease. It is somewhat remarkable that nearly eighty-five per cent. were successful vaccinations or revaccinations. When diarrhœal, dysenteric, or typhoid disorders become prevalent at any point they are immediately checked by appropriate remedies placed at the disposal of the medical inspectors, master-mechanics, and supervisors, with explicit directions for use. Malarial disorders especially have been kept well under control by the distribution of large quantities of approved antiperiodic remedies, which are at the command of every member."

Although the Baltimore and Ohio Company gave the first impulse to the organization of the Relief Association and has liberally endowed and otherwise aided it, probably largely for business reasons, the most important result achieved is unquestionably the sanitary education of the employés. Under intelligent direction this feature may be made of the highest possible usefulness. Should other corporations follow this example, the realization of the dream of the sanitarian—that preventive medicine shall be recognized as at least of equal importance with curative—may not be so far in the future. G. H. R.

PROCEEDINGS OF SOCIETIES.

AMERICAN MEDICAL ASSOCIATION.

THE following is an abstract of the proceedings in the several Sections at the Thirty-Seventh Annual Meeting of the Association, held at St. Louis.

SECTION ON PRACTICE OF MEDICINE, MATERIA MEDICA, AND PHYSIOLOGY.

J. F. Whittaker, M.D., of Cincinnati, Ohio, Chairman; B. L. Coleman, of Lexington, Kentucky, Secretary.

Dr. Albert C. Haven, of Lake Forest, Illinois, read the first paper, on

THE ETIOLOGY OF DISEASE.

The writer declared that life is impossible to define, but it is known to act in accordance with peculiar laws. Protoplasm assumes different permanent forms in conformity with law. Disease is external in its origin primarily, but its effects may be transmitted by heredity. This is exemplified in the zymotic diseases. Much light has been thrown upon the etiology of disease by experimentation. He regarded condemned criminals as fit subjects for physiological experiment.

This led to a discussion upon the bacterial origin of disease. Dr. Wetmore, of Illinois, contended for better recognition of the chemical changes in the tissues in disease. Dr. Bremer, of St. Louis, defended the bacillary origin of tubercle, and declared that the bacterial theory of the etiology of disease is now a logical deduction from the facts of experiment. Dr. J. S. Lynch, of Baltimore, regarded the bacteria as carriers or results of diseased processes. No difference can be detected between an inflamed lymphatic and a scrofulous gland *prior to caseation*. He claimed that the bacteria accompanying the caseating process are secondary and not causative.

The next paper, by Frederick N. Huston, of Rockland, Maine, was entitled

THE EFFECTS OF CERTAIN PHYSIOLOGICAL PRINCIPLES THAT HAVE NOT BEEN NOTICED IN AID OF THE CIRCULATION OF THE BLOOD.

In the absence of the author, it was pre-

sented and read by Francis E. Hitchcock, M.D., of Rockland, Maine.

Reviewing the usual physiological theories as to the cause of the circulation of the blood, the writer considered them insufficient to explain all the phenomena. Cohesion he held to be a force acting in the blood-vessels, owing to the absence of air in the vessels. The conditions are somewhat like those of a siphon-pump. He claimed that each contraction of the ventricles exerts a force upon the venous circulation, as it does upon the arterial side, though not by a *vis a tergo*, but by a contrary action,—through cohesion.

An air-bubble entering the vein increases in size and breaks up into a number of bubbles, owing to the aspirating force of the respiratory movements of the chest. His own observation was that if a patient holds his breath when a hypodermic injection of morphine is given, there is less danger of the accidental introduction of air into the vein than under ordinary circumstances.

The paper closed with a brief notice of the sounds and impulse of the heart.

A paper was then read by L. Bremer, M.D., of St. Louis, Missouri, entitled

ESSENTIAL VERTIGO.

Vertigo, when severe and persistent, interfering with comfort and occupation of the patient, demands consideration as a disease. Essential vertigo, as defined by Nothnagel and others (also idiopathic or simple vertigo), is a form which occurs in the absence of cause-lesion, generally occurring in the neurasthenic. Agarophobia, topophobia, and dinophobia are among the prominent symptoms of this kind of vertigo. Hallucinations and psychical symptoms are also prominent in some cases. Complications of disordered hearing, vision, or digestion frequently accompany the disease, but this must not therefore be confounded with aural, ocular, or stomachal vertigo.

An equilibrial cerebral centre has not yet been definitely located, as the machinery of equilibration is complex. In the production of vertigo the writer believed that the medulla oblongata and the subsidiary or local vaso-motor centres play an important part. These centres are particularly unstable in the neurasthenic and nervously exhausted. The cerebellum is not, according to recent investigations, the exclusive co-ordinating or equilibrial centre, but it is one of reinforcement of the motor impulses as they are transmissible from the psycho-motor area to the voluntary muscles. Essential vertigo is generally brought on by a vaso-constriction in those arteries that supply the mid-brain, the recognized seat of the centre of equilibration. But this vaso-constriction is chronic, and with this a more or less permanent irritability and instability of the equilibrial ganglionic cells is brought about. In advanced and confirmed cases the highest sensory impressions suffice to bring on the vertigo without the vascular disturbance. The remote cause of essential vertigo is a neurotic disposition; the proximate causes are exhausting diseases, excesses of all kinds, the rays of the sun, overheated and badly-ventilated rooms, indigestion, mental maladies, and (in a great many sections of the country) malaria. The last-named disease constitutes a fertile soil for growth and development of all kinds of neuroses. Even after malaria is cured, the vertigo caused by it may persist. The seasons play an important part in the vertigo: moderately-cold winter months, May, and June are the most favorable to the patients; the heat of the summer months is prejudicial to them. Therapeutic measures must be reconstructive in character. The food and clothing (wool) must be the chief objects in treatment. There is scarcely a case of vertigo without indigestion, usually nervous dyspepsia; yet we can't call such a case one *a stomacho læso*, although the stomach, above all, has to be treated. Cold water is a useful and powerful remedy; warm bathing and hot water are injurious; the bromides and quinine give temporary relief; iron generally aggravates the trouble, although judging *a priori* it is indicated.

Vertigo patients are, as a rule, anæmic. Arsenic is often useful; the vaso-motor remedies, as, *par excellence*, amyl nitrite and ergot, seem to have no influence on either anæmic or hyperæmic vertigo. Electro-therapeutic measures have in my hands failed completely. The prognosis is good *quoad vitam*, but bad *quoad valetudinam completam*. Life is surely compromised by essential vertigo, and patients may grow old with it, but the constant alarm experienced by the patients may set up physical and psychical ailments of greater or less gravity. An ominous symptom is loss of memory and confusion of thought. It would be a comparatively easy task to combat vertigo successfully were it not for the fact that we have in most instances to deal with bad habits (alcohol and tobacco), unwholesome surroundings, and adverse circumstances of a financial nature. However complete the success of treatment in a case may seem, there always remains a tendency to relapse. Like the sword of Damocles, vertigo hovers over the head of the predisposed, ready to descend on the victim when least expected.

The next paper, read by Dr. O. T. Shultz, of Mt. Vernon, Indiana, was on

THE USE OF SO-CALLED ANTIPYRETIC DOSES OF QUININE IN TYPHOID PNEUMONIA.

Quinine is useful in pneumonia not only because of the reduction in temperature which it causes, but also on account of its favorable influence upon the course of the disease.

Confining the inquiry to the effects accompanying the methodical exhibition of so-called antipyretic doses of quinine in cases of typhoid pneumonia, and what precautions must be

observed in administering such doses, he explained at the outset that his practice lay in a region lying at the confluence of two rivers in Indiana (Ohio and Wabash) and among farmers. From May, 1875, to May, 1886, he attended two hundred and thirty-eight cases of croupous pneumonia, chiefly asthenic, with a mortality of six and a half per cent.

Quinine not only reduces the pyrexia, but also slows the heart's action by ten to thirty beats, and the pulse becomes stronger and fuller; it averts the danger of heart-paralysis; respiration is also favorably influenced, and the patient's general condition is improved. He also claimed that the course and termination of the disease are modified, though the duration may not be shortened.

The administration is to be governed by the following rules. Quinine must be given early, or as soon as typhoid symptoms appear, and in most cases the large doses should begin on the fifth day of the disease. If there be very high temperature or signs of heart-failure, it should be administered as soon as the condition is recognized. The dose is fifteen to thirty grains, with hydrochloric acid in solution, given every evening if the temperature be 102° or over, or, if the pulse be weak, to be continued until defervescence takes place. If the heart be very weak, the quinine should be preceded by brandy or whiskey, or from three- to five-grain doses of camphor given every hour, until the danger of fatal prostration has passed, before giving the quinine.

Dr. S. S. Laws, of Columbia, Missouri, read a biographical sketch of Louis Pasteur, recognizing the value of his labors in their application to medical science.

Dr. Philip Zenner, of Cincinnati, read a paper entitled

VALUE OF THE KNEE-PHENOMENON IN THE DIAGNOSIS OF DISEASES OF THE NERVOUS SYSTEM.

This phenomenon has been known to the profession since the simultaneous publications of Erb and Westphal in 1875. Its clinical significance is attached to the fact, pointed out by Westphal in his earliest publication, that it is present in health and absent in cases of locomotor ataxia, usually disappearing at the very commencement of the disease. It may also be absent in anterior poliomyelitis and neuritis when the lumbar portion of the spinal cord or its nerves are the seat of disease. It may also be absent in many cases of diabetes mellitus, and is sometimes temporarily abolished in chronic alcoholism and after attacks of diphtheria.

Various examinations have been made to determine whether it is absent in health. Berger missed it in 22 out of 1409 healthy men; Eulenberg, in 4.8 per cent. of healthy adults and 5 per cent. of children; Bloch, in 5 out of 694 school-children. Pelizans examined 2403 school-children; at first he missed it in 6, but finally he obtained it in every one. Jendrassik examined 1000 persons, chiefly adults, not suffering with nervous diseases, and elicited the phenomenon in all but one, a case of diabetes mellitus.

The author then gave his own observations, which had embraced the examination of 2106 persons, all of whom were adults and chiefly males. Of these, 1174 were inmates of various insane asylums; the others, except 100 in the medical wards of the city hospital, were mostly in apparent health. Of this number, the knee-phenomenon was abolished in 28, 5 of whom had fully-developed locomotor ataxia, 12 were in the earlier stages of the same disease, while 11 manifested no other symptom of disease of the cord.

The cases of insanity were treated of separately, because Westphal had shown that in such cases the absence of this phenomenon, even when there are no other symptoms, is strong presumptive evidence of disease of the posterior columns of the cord, and because of its special value in diagnosing the form of insanity. Of the 28 cases of insanity with abolished knee-phenomenon, 10 were cases of general paralysis, and in 2 it was doubtful whether there was general paralysis or not, notwithstanding the fact that there were at that time very few cases of general paralysis in the asylum. In many cases of general paralysis and locomotor ataxia we have reflectory rigidity of the pupils: they do not respond to light. In 4000 insane, 492 had rigidity of the pupils, 85 per cent. of whom had general paralysis. Nine out of 10 of the essayist's cases of general paralysis had pupil-symptoms, 1 out of the 2 doubtful cases, and only 2 out of the 11 other cases. Absence of knee-phenomenon and presence of rigidity of the pupils are of great assistance in diagnosticating obscure cases.

In 932 sane persons, the knee-phenomenon was found absent in five, only two of whom had a healthy spinal cord. The fact that the phenomenon is absent in other pathological conditions does not lessen its significance in locomotor ataxia, for the other conditions can be easily differentiated. In the author's experience it is not so often absent in diabetes mellitus as some observers believe. Rosenstein missed it in 6 out of 9 cases, and Bouchard in 19 out of 66. The author found it present in all. He did not think it often present in chronic alcoholism. He had examined quite a number of cases in the city hospital, and 404 men at the workhouse, who were many of them hard drinkers. Strychnia restores it in chronic alcoholism, but does not in locomotor ataxia.

The author then spoke of the method of eliciting the knee-jerk. After careless examinations it is often said to be absent when it can be readily elicited. The ordinary method will answer in most cases, but in some it will

not. Should it fail, the person should sit upon a table with the legs dangling and the knees entirely exposed, and the ligament be struck in every part. In a small number there will still be failure by this method. For such cases Jendrassik has recently pointed out another method. The patient is seated as above, and while the examiner strikes upon the ligament he is requested to link the bent fingers with one another and pull as hard as he can. This augments the muscular tonus, and the response increases. This method has enabled the author to find it in a number of cases which did not respond before. So great was the difference that the author thought he might find it in some cases of locomotor ataxia; but he failed. In some of his cases the response, though present, was so slight that it might be pathological.

Is the phenomenon always absent in locomotor ataxia? Westphal says it is in typical cases, whenever the disease affects the posterior columns in the lumbar region, which occurs usually at an early period. Later writers have reported cases with post-mortems where it was present. This, however, is so rare as to be of little significance. The essayist had never seen it absent but once, and in this case the appearance was that of a diffuse myelitis rather than of a systemic disease of the cord. He had a number of cases under observation at present where the phenomenon was abolished on one side and difficult to elicit, but these were all still in the earlier stages of the disease.

Dr. Joseph Jones, of New Orleans, reported, with observations, the results of medical treatment in the Charity Hospital, New Orleans, during the years between 1869 and 1886.

Dr. A. F. Potter, of Boston, read a volunteer paper on

POTASSIUM CHLORIDE,

in which he called attention to the restorative value of this remedy, especially to the muscular system. He used it in conjunction with iron and bichloride of mercury with excellent effect in anæmia and debility.

Dr. John A. Octerlony, of Louisville, Kentucky, read a paper on

THE CLINICAL ASPECTS OF MALIGNANT RENAL DISEASE,

which was illustrated by cases and drawings.

The rarity of the disease was set forth, and the great diversity and irregularity of its symptoms were pointed out.

The writer called attention to the feeble influence of heredity in this form of cancer: he had found that external violence often appeared to be the most important factor in its production.

A number of cases were quoted, showing that renal calculi had a causative relation to it. It was suggested that floating kidney was also prone to take on malignant degeneration.

The main symptoms—the presence of a tumor, pain, hæmaturia—may each and all be entirely wanting.

Among the more unusual complications mentioned were perforation of the duodenum, jaundice (by pressure of a cancerous right kidney upon the biliary ducts), ascites, implication of spinal cord with hemiplegia, peritonitis, etc.

The diagnosis is often fraught with difficulty. Cancer of the stomach and of the liver, enlargement of the spleen, mesenteric tumors, hydronephrosis, cystic degeneration of the kidneys, uterine and ovarian tumors, abdominal aneurism, have all been confounded with renal cancer.

Several tables setting forth the differential diagnosis were given, among them the following.

The differential diagnosis between cancer of the stomach and cancer of the kidney rests upon the following characters:

Cancer of Stomach.	*Cancer of Kidney.*
Vomiting is the rule.	Vomiting generally absent.
Hæmatemesis.	Blood very rarely vomited.
Hæmaturia absent.	Hæmaturia generally present.
Tumor in epigastrium.	Tumor in one or other flank.
Tumor small.	Growth often very large.
Tumor movable.	Tumor generally fixed.
Tumor descends with diaphragm.	Tumor does not descend with diaphragm.

Enlarged spleen and renal cancer may be distinguished by attention to the following points:

Enlargement of Spleen.	*Renal Cancer.* (Left Kidney.)
Absence of descending colon in front of tumor.	Descending colon may be found in front, vertically dividing the tumor into two lateral halves.
Border of tumor often thin, rigid, smooth, but not rounded.	Border irregular, nodulated, rounded, not thin.
Extends upward under the ribs.	Does not extend under the ribs.
Direction of tumor downward and inward.	Extends downward, chiefly towards iliac fossa.
Very movable.	Generally almost or quite immovable.
History of malaria or leucocythæmia.	No history of malaria or leucocythæmia.

Hydronephrosis may be separated from renal cancer as follows:

Hydronephrosis.	*Renal Cancer.*
Generally unilateral.	Generally unilateral.
Tumor soft.	Tumor hard, or irregularly soft.
Fluctuating.	Rarely or imperfectly so.
Tumor liable to subside suddenly at times, with copious discharge of urine.	Tumor permanent.
Tumor not likely to reach excessive development.	Tumor often of enormous size.
Movable.	Generally fixed.
Descends with diaphragm.	Does not do so.
Slow growth.	Rapid growth.
No cachexia.	Cachexia present.

Another form of renal disease likely to be confounded with it may be distinguished as follows:

Renal Cancer.	*Cystic Degeneration.*
Generally unilateral.	A bilateral affection.
Tumor may reach much greater size than is ever attained by cystic degeneration.	Tumor not very large.
Tumor stationary, and does not move with diaphragm.	Tumor movable.
Course more rapid.	Course rather chronic.
Cachexia tends to develop early.	No cachexia.
Death generally by exhaustion.	Death by uræmia.

Finally, ovarian tumor is to be diagnosticated from renal cancer:

Ovarian Tumor.	*Renal Cancer.*
Generally unilateral.	Generally unilateral.
Develops from below.	Develops from above.
Tumor soft.	Tumor hard.
Tumor generally smooth.	Tumor irregularly nodulated.
Intestine pushed aside. Resonance to the outer side, with central dulness.	Loop of intestine common. Dulness to the outside.
Aspiration brings away characteristic ovarian fluid.	Aspiration brings pure blood or sero-sanguinolent fluid, sometimes cancerous material at point of needle.

The mode of termination of renal cancer is generally by exhaustion, or by intercurrent inflammation. Death by uræmia is found to be very rare.

The treatment must necessarily be palliative so far as drugs are concerned. Surgery, however, has done a good deal towards prolonging life, and in some instances restoring the health of patients with renal cancer.

Among the dangers are coexistent malignant disease of the other kidney, absence of the other kidney, coexistent chronic inflammatory disease in the non-cancerous gland.

The paper closed with a résumé of published nephrectomies for malignant disease of the kidney.

This was followed by a volunteer paper by Dr. J. W. McLaughlin, of Austin, Texas, on

THE ETIOLOGY OF DENGUE.

As a matter of clinical observation during the epidemic of dengue last fall in Texas, the lecturer had been able to demonstrate the contagious nature of the disease. In the blood he discovered micrococci spherical in shape and red or pink in color, often surrounded by gelatinous envelopes or capsules. He always succeeded in growing in culture-tubes, upon the surface of the jelly, micrococci, and no other form of bacteria, which in size, color, shape, and behavior are identical with those seen in fresh dengue-blood. These organisms were also found in blood kept in sterilized bulbs for three months. They were also detected in the vomited matters, likewise in the urine, of malignant cases. The best reagent for staining he found to be methyl blue in a solution of caustic potash. These micro-organisms were uniformly found in the blood of about forty cases of dengue, and in every instance the tubes inoculated showed upon the surface of the jelly at the point of inoculation a white spot elevated above the surface. When a small amount of this was examined under a high power, it showed invariably a pure culture of micrococci which in every respect were identical with those found in the blood. The uniformity of these results in growing pure cultures of dengue micrococci certainly indicates that the matter of inoculation came from a common source,—*i.e.*, the blood.

Dr. Herbert F. Williams, of New York, read a paper on

PNEUMATIC DIFFERENTIATION,

and demonstrated the working of the Pneumatic Cabinet. (See page 655.)

Dr. Fletcher Ingals, of Chicago, and Dr. Whittaker spoke in favor of the use of the cabinet, especially in the early stage of phthisis.

Dr. F. H. Patten, of Dayton, Ohio, read a paper on

PNEUMONIA IN THE OLD,

recommending restorative and supporting treatment.

Two papers were next presented and read by title: "Meconeuropathia," by C. H. Hughes, and "Laws Determining Sex," by Robert Funkhouser, both of St. Louis.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN AND CHILDREN.

Dr. C. S. Gordon, of Portland, Maine, Chairman; Dr. J. F. Y. Paine, of Galveston, Texas, Secretary.

First Day.—Dr. W. H. Wathen, of Louisville, Kentucky, read a very interesting paper on

THE TREATMENT OF THE MEMBRANES IN ABORTION AND IN LABOR.

The lecturer directed attention to the diversity of opinion in the profession as to the anatomy of the membranes and to the mechanism of their separation and expulsion, also to the relations which the membranes, fœtal and maternal, sustain to each other. He claimed that the membranes are separated, usually, after the expulsion of the fœtus, and that the placenta presents in the os folded on its fœtal or amniotic surface, except in fundal implantations or where it is inverted by drawing upon the cord. He opposed expectant methods in any instance, and advised the removal of the membranes in all cases, except in those of abortion before the end of the second month. Before this time, there being no placenta, he does not remove retained membranes, if bleeding ceases, unless they protrude through the os and can be removed without introducing the finger into the uterus. He practises Crédé's method of expression, and sometimes supplements this by drawing gently with the

fingers on the edge of the placenta. He dilates the os and then removes the membranes with the fingers; but if the os cannot be dilated by the fingers he uses Ellinger's dilator, his own modification of Leonard's dilator, or a Molesworth dilator. He anæsthetizes the patient and introduces a part or his entire hand into the vagina, and dilates the os and explores the entire uterine cavity, separating and removing the membranes. He advised disinfection of the hands, etc., in all cases, but showed from statistics that the results of expectation are more unfavorable than the results following the immediate removal. He opposed the use of ergot until the membranes are expelled.

Dr. Fuller, of Maine, thought the paper one of great utility. His practice has been uniformly to force delivery of the placenta as soon and as readily as he could. In his experience prompt removal of the placenta prevents hemorrhage. Generally he secures the placenta within five minutes, which haste he considers a measure of safety.

Dr. W. P. King, of Sedalia, Missouri, during twenty years had seven hundred and nineteen natural labors and twice as many abortions. His practice had been early removal of the placenta if at any period near term. He generally waited long enough for another pain, judging from the past, and, if the patient does not have one, he makes her have one. He spoke of unbuttoning the placenta and turning it out as a boy does his tongue. He recommended dilatation with the finger and forceps, then to go in with the duck-billed forceps. He never failed in the last few years to wash out the uterus with hot (115° to 135° F.) sublimate-solution (1 : 4000). He carried a concentrated solution, and made the dilute solution on the spot. He used the reflex catheter, and washed out till the water returned clear. He rendered the hand aseptic. The two oft-quoted cases, the Indian woman and the white, he thought not at all analogous. In closing, he recommended asepsis and a clean removal of everything.

Dr. Garcelon, of Maine, asked if he understood the last gentleman aright that he had twice as many abortions as natural labors.

Dr. King replied that he did.

Dr. Garcelon asked what kind of people he lived among.

Dr. King replied that they were chiefly immigrants from New England.

Dr. C. R. Reed, of Middleport, Ohio, does not wait as long now as he used to. He found that the longer he waited the more the os contracted, and the greater was the difficulty of removal.

Dr. Potter, of Buffalo, thought that this subject would from now to the crack of doom be a point of earnest discussion in the medical world. He criticised the use of the terms massage and Crédé's method as used in the discussion. Merely to make suprapubic pressure was not Crédé's method, but to place the fingers behind the fundus uteri and the thumb in front of it and turn the placenta out as we do a peach-seed. Beyond and above the question of hemorrhage was that of subinvolution of a hyperplastic character.

Dr. Morris, of Baltimore, favored the opposition to delay expressed in the discussion. He never allowed a woman to lie twenty minutes without delivering the placenta. He believed in heroic treatment. In abortion we cannot treat so heroically.

Dr. Hunter, of Minneapolis, spoke adversely to intra-uterine injections. He had helped to kill one woman with these injections, since which time he held for the uterine cavity the greatest respect. He has experienced unfavorable results after the use of a 1 to 2000 sublimate solution.

Dr. W. W. Potter, of Buffalo, then read a paper entitled

SOME OBSERVATIONS ON THE UTERINE SOUND, WITH SPECIAL REFERENCE TO ITS USE IN GYNÆCOLOGICAL THERAPEUTICS.

It was but a few years ago when a Ferguson's speculum, caustic-holder, uterine dressing-forceps, and Simpson's sound were an ample outfit for the practice of gynæcology. The sound has been used in almost every malady peculiar to the pelvic organs, and I am sure it is in the range of truth to assert that this instrument has done woman more harm than any other used in the management of her diseases. The young physician is prone to its use, and, sad to say, often causes irreparable damage to the genital tract or health of woman. Nor is this animadversion applicable exclusively and alone to the professional novice. His experience has taught him, in every instance in those cases which seem to invite its use for diagnostic purposes, to use it with the utmost caution, circumspection, and gentleness. He insisted that this instrument should be applied only as a *dernier ressort* and in conjunction with extreme doubt. Have we not repeatedly seen the endometrium so sensitive as to spring into violent inflammation as a result of contact with the sound? Metritis, both peri- and parametritis, salpingitis, ovaritis, pelvic cellulitis, are among the results. Woman has been caused to abort in numberless instances by the use of the sound, and it is often the remote cause of those indescribable symptoms, reflex in character, which we call neuroses,—hystero-neuroses, if you please,—that are difficult to locate, but are bearable: neuralgias, headaches, backaches, etc. Mr. Lawson Tait has found that, as his experience increases, his use of the speculum and sound grows less and less. This comes from the increased *tactus eruditus*. He says, "Educate the finger-tips." This were well; but no novice or mere general practitioner—in fact, few of us—can reach the perfection of

a Tait. However, the nearer we can come to attaining this the better gynæcologists we are, and the less will we use the sound.

The essayist said that the os uteri should always be patulous and the endometrium free from disease before the sound is used. When necessary, the delicate virgin-silver probe of Sims is better and safer than the Simpson sound. This should never be passed at the first interview. We should, if possible, avoid it until we are quite familiar with the topography and peculiarities of the sexual tract of our patient. We should wrap absorbent cotton about the instrument to serve as a cushion for the metal. He could not speak in too strong terms against the use of the sound to replace the retroposed uterus: he named this use of the instrument as barbarous practice, and recommended the intelligent and persistent use of manipulation and the genu-pectoral position. The sound has taught us some good things, chief among them being the better use of our fingers. He hoped that with the use of the better-educated finger-tips the sound would grow less and less in demand and use, and we shall be rid of much of the opprobrium which the young and growing art, gynæcology, is now compelled to suffer.

Dr. Gordon, the President, in a neat speech, complimented the paper very highly and endorsed every word of it.

Dr. George Engelman, of St. Louis, arose to express his thanks to Dr. Potter for having expressed in words what the speaker had practised for years. He has quite a collection of sounds, but in the past three years has not used one of them; the finger is more satisfactory and true; the sound is useless in the great majority of cases. We have used ergot, the applicator, and the sound to the great injury of women; we are progressing in gynæcology by dispensing with these. He had even found it unnecessary to use the soft, pliable sound wrapped with cotton. The finger must be used for diagnostic purposes far more frequently than it is; injury from the sound, in the aggregate, is far greater than the benefit derived.

Second Day.—Dr. H. O. Marcy, of Boston, made a communication entitled

THE LESIONS OF THE PERINEUM, AND THEIR REPAIR.

In commencing his lecture he projected a number of photographs on the screen, taken from a great variety of sources from the time of William Hunter to the present day. He demonstrated clearly the anatomy of the perineum and the importance of support to the parts. He showed the true relations of the so-called perineal body and recto-coccygeal structure; then he reviewed the ordinary methods of repair of lacerated perineum; then he showed the ordinary stitch, which he said was faulty no matter what the material used. The speaker then demonstrated his own operation, first described in this Section two years ago at Washington. Since that time he has still further perfected it. It was described as follows. When the rupture is incomplete, render the structures tense with the fingers in the rectum and carefully separate subcutaneously, lifting up a considerable depth of vaginal mucous membrane, together with as deep a layer of substructure as the operator may deem necessary. The anterior flaps should be cut without opening into the vagina. This is then lifted and the deeper structures approximated by pins introduced parallel with the rectum and so fixed in their peculiar construction that they look not unlike a safety-pin; they are in two parts, and hold the tissues without strain. Insert two, three, or more in this manner; the pins remain six to ten days. In the complete rupture the operation varies only in the lateral dissections, which are closed in. He advised the emptying of the rectum in two or three days, never allowing the fæces to collect.

He showed a number of frozen sections,—one of a woman who hung herself when eight weeks pregnant, and one of a woman who died during delivery; showed the rectum and bladder full and empty; showed work by Savage, Henly, Hart, and others, and Emmet's operation. He then exhibited his safety-pin made of German-silver wire, No. 60, and resembling in appearance a safety-pin.

Dr. E. C. Gehrung, of St. Louis, in the discussion which followed, showed sutures of his own.

Dr. S. C. Gordon, of Portland, Maine, said that for eighteen months he had used nothing but catgut suture in perineal operations, with the exception of the complete rupture. He makes the crescentic denudation, and never has any trouble, pain, or discomfort, as there are no stitches to remove.

Dr. Wathen, of Louisville, Kentucky, in speaking of Dr. Gehrung's sutures, said they had some benefits, but they were more than overcome by the presence of the bodies on each side. He thought it best to use the suture which causes the least pain and perfectly adapted the parts. In incomplete laceration of the perineum a failure is the exception to persons of experience. The operation described by Dr. Marcy has value superior to the operation of Emmet. He thought that Dr. Marcy's needles would cause some pain by their mere presence. The advantage of his operation is that we do not destroy any tissue. Destroy no tissue, get perfect adaptation and union, and no septic matter can get in. Two great improvements are, the manner of denudation and the saving of tissue by Dr. Marcy.

Dr. Gillespie, of Tennessee, thought the time of operation of importance. After three days' delay he has had unusually good results. He prefers Emmet's plan with the silver sutures and the straight round needles.

Dr. Marcy, in reply, said there was no

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amount of inconvenience or suffering from the pins if they are placed parallel and do not compress the tissues. He spoke of and showed sutures made from the tails of the fox-squirrel and kangaroo.

Dr. E. W. Cushing, of Boston, Massachusetts, spoke on

THE PATHOLOGY OF EROSIONS (SO CALLED) OF THE OS UTERI.

He also used the screen, showing a number of microscopical specimens illustrating the formation of glands in the cervix uteri, and the similarity of erosions and beginning of epithelioma. He endeavored to show the difference between erosions on the os uteri and on the skin, which were said to be so similar.

Dr. A. C. Miller, of Cleveland, Ohio, discussed this paper.

Dr. Franklin H. Martin, of Chicago, read a paper on

ELECTROLYSIS IN GYNÆCOLOGY.

The mode of action and the physiological and therapeutical effects of electrolysis were first considered. He mentioned the principal advocates of electrolysis, and enumerated diseases in which it was beneficial,—varices, polypus, nævi, epilation, hydrocele, bronchocele, extra-uterine pregnancy, hernia, hemorrhoids, epithelioma, and uterine fibroid. He also related his experience with an extra-uterine fibroid. This disease is reported cured by this means by numerous authors. He gave the particulars of the application of the remedy, spoke of the mixed galvanic and faradic method, and showed his manner of applying electrolysis.

Dr. Ely Van de Warker, of Syracuse, New York, complimented the author of the paper, and reported a case of his own of solid uterine outgrowth to which he had applied electrolysis. The operation proved to be very painful. The patient groaned and writhed under the pain, though anæsthetized. After three days he observed a rise in temperature, and an abscess followed. The tumor was reduced in size, but the woman was very ill and barely escaped death. Two other cases had submitted to an operation, but the results were negative.

Dr. Robert Newman, of New York, took great interest in the subject. He recommended weak currents. Instead of twenty, thirty, eighty cells, we should use two, three, four, five, six cells. The object is absorption. The strong current does harm, the weak causes absorption. In gynæcology electrolysis has a wide field. There is one great thing, —we have a safe, sure remedy to save the woman suffering from extra-uterine pregnancy. Do not use needles; use electrodes. In cases of hardened tissues electrolysis has done much good in his experience. In malignant growths and cancers it has done good, and has also been followed by failure. In stricture of the urethra, in females, in his hands it had never failed.

Dr. Hulbert, of St. Louis, said he was an electrical crank. He reported some remarkable cures. He said we should measure the dose as in other remedies, and thought Dr. Van de Warker's failures due to his not having measured his dose.

Dr. George Engelman, of St. Louis, said that the lecturer had only brought this subject before us in a scientific light. He only touched on the results to be attained. He was surprised at Dr. Van de Warker and Dr. Newman speaking so indefinitely of strong and weak currents. He had always insisted on using the galvanometer. Cases have been reported here where cures occurred only after forty-five sittings. If you will measure your electricity you can cure patients in five or six sittings of five minutes each. The kind of electricity used is quite as important as the number of cells. Give a sitting of five minutes and a strength of forty, fifty, eighty, one hundred milliampères, according to how much the patient can bear. It may cause slight pain at first, but should not after that. Avoid the peritoneum if possible, but if necessary pass through it. He uses one needle and a large fourteen- by sixteen-inch plate. The cells are gradually added until the galvanometer shows enough.

Dr. E. G. Zinke, of Cincinnati, read a paper on

PUERPERAL FEVER AND THE EARLY EMPLOYMENT OF ANTISEPTIC VAGINAL INJECTIONS.

This paper considered chiefly the value and necessity of antiseptic or simply warm-water injections as recommended for prophylactic purposes in normal cases of labor in private practice. It dwelt largely also upon the differential diagnosis between puerperal septicæmia and remittent fever following parturition. The paper was based upon a case in the doctor's practice, of which the following is a brief report:

Mrs. ——, American, æt. 26, suffered a miscarriage at the end of the eighth calendar month. The labor was entirely normal, as was also gestation up to the miscarriage. The placenta came away spontaneously and after only a few moments. The external genitalia were washed, but no antiseptic washes were used.

All went well till the third day, when the patient had a chill followed by a temperature of 106°. She experienced, however, scarcely any pain, and the lochia were free from odor. Two hours later she had another chill, and the temperature went up to 107.5°. Professor Palmer was called in consultation. He thought the high temperature due to something in the uterine cavity, but Dr. Zinke did not think this possible, from the nature of the labor. It was determined to await the action of quinine before washing out the uterine

cavity. Later, carbolized warm-water injections and turpentine stupes were added to the treatment. Temperature fell to 101°, then rose to 103°. Only slight tenderness in the hypogastric region, and the lochia free from odor. When the temperature reached 104.5° the uterine cavity was washed out with warm carbolized water, using the reflex uterine catheter. This was followed by some pain, but there was no decline in the temperature, neither was there a removal of anything which might be the cause of the trouble. The temperature fell later under the use of tincture of veratrum viride and salicylate of soda.

Comparing the local manifestations with the range of temperature and pulse, he became daily more convinced that the malady was not of a local character. Of course there were physical signs of pelvic cellulitis, but they were not present in the beginning, nor did they ever assume a serious nature. Indeed, the cellulitic condition diminished while the temperature and pulse continued high, having a distinct morning remission and evening exacerbation. From the first he held, and never could free himself from the thought, that some element other than septicæmia through the parturient canal was the active agent in the production of the disease; that possibly—nay, probably—the body had been invaded some time prior to her confinement, and that labor simply precipitated its onslaught on the system.

Was it typhoid or remittent fever? Diarrhœa, rose spots, and stupor were absent. The husband then stated that about a month before her confinement she had complained of languor and chilliness. Was it, then, remittent? In all probability, yes. His consultant did not concur with him. Seventeen days after confinement the temperature was 99.5°; next day 101.4° and still rising. The next day, the doctor's orders not being followed, he retired from the case. Subsequent to this she was only part of the time under the care of a physician, and no record of the temperature was kept. The patient recovered after a sickness of two months' duration.

The questions which present themselves for consideration are—

1. Was this a case of puerperal septicæmia, remittent fever, or something else?

2. Could it have been avoided by the early use of antiseptic vaginal injections?

3. To what extent is the use of antiseptics, scientifically and practically, justifiable or necessary?

The reporter did not believe this to be septic, but, if so, thought it must have entered through another channel than the parturient canal. Puerperal fever, he thought, should embrace only those diseases which occur during the puerperal state. He was satisfied that all cases of puerperal fever which find their inception through the obstetric channel from an external cause may, to some extent, be mitigated or prevented by the early and frequent use of antiseptic vaginal injections. Scarlatina, measles, diphtheria, etc., find their way through other avenues and often mislead the physician.

Antiseptics in normal labor ought not to mean anything except ordinary cleanliness in every respect, the avoidance of frequent examinations and unnecessary aids, needless exposure in the support of the perineum, the tying of the cord, the delivery of the placenta, and the washing after labor.

Washing out the vagina immediately after normal labor, he thought, should be termed meddlesome midwifery: it did no benefit, prevented nothing, and might do harm. In prolonged or instrumental delivery, if the hand has been introduced or if injuries have been sustained, vaginal injections are always—uterine injections rarely—indicated.

The essayist referred to a death after vaginal injections in the practice of Dr. J. C. Cleveland, of Cincinnati, to the writings of Drs. Bartlett and Lydston unfavorable to the routine injections, and related three cases which occurred in his own practice, in which ill effects were observed after vaginal injections most carefully performed.

Out of nearly four hundred cases of labor attended by the essayist, the case reported was the only one which could be suspected of being puerperal fever. From the favorable action of quinine on this patient until her refusal to take it, from her previous history and the impossibility of there being any remains of the placenta, etc., in the womb, the doctor was led to believe this to be a case of remittent fever.

Third Day.—The order of business began with the discussion of Dr. Zinke's paper read on the day previous.

Dr. Charles Knapp, of Evansville, Indiana, thought that, from the action of quinine and the non-action of the intra-uterine injections, the case was not of bacterial origin. He believed in antiseptic midwifery, because it was clean midwifery.

Dr. Sargent, of St. Louis, very seldom used intra-uterine injections.

Dr. Reamy, of Cincinnati, thought the especial aim of the author of the paper was to discountenance routine vaginal injections. He wished to go on record as entering his protest against the routine practice of vaginal injections after delivery. He did not wish to be understood as denying the germ theory of the origin of disease, and that physicians and nurses can carry the infection on their hands. If you have septicæmia, then employ your germicides. Are we to consider the vagina of every woman who has borne a child a foul crater? In the vagina after childbirth we have granulations following lesions. Simple injections of water will destroy these granulations and prepare the woman for disease. A vaginal injection to do any good must be

performed every hour. Washing out the vagina one, two, or three times a day is hollow mockery. The nurse may throw the stream into the uterine cavity: hence the physician to have it done properly must do it himself. It is a dangerous practice, routine injection of the vagina, even with water, not to say chemicals. He would favor intra-uterine injections under certain conditions.

Dr. W. W. Potter, of Buffalo, New York, asked where Dr. Reamy drew the exact line of the beginning of septicæmia. This is sometimes plain, sometimes dark. He believed in letting well enough alone. If you have purely natural labor, do not use the injections. If you have interfered manually or instrumentally, use your injections fearing trouble. He recommended Chamberlain's glass tube. If the vagina is foul, it is often a reason for going up higher into the uterus.

Dr. Reamy answered that he was speaking of natural labor. He advised delivering the patient with the highest obstetrical skill, with all gentleness. Keep clean, make no avoidable lesions, and little trouble will follow. Before long it will be the fashion to cremate every woman who has borne a child.

Dr. Zinke said his object in bringing the case before the Section was to show that we as physicians owe not all to our patient, but also something to ourselves. He felt very indignant when the people blamed him for being the cause of all their trouble in the case reported.

Dr. E. S. McKee, of Cincinnati, read a paper entitled

THE EARLY DIAGNOSIS OF PREGNANCY.

The author considered the *opprobrium obstetrici* our inability to make a prompt but positive diagnosis of early pregnancy. Reliable evidence is sadly deficient in the first months. This fact in mind, he turned his attention to the symptoms of the first trimestrium, particularly those of recent discovery. First were considered those signs which might occur at the time of conception. A number were mentioned. There were numerous exceptions to any one of them, and the same condition might be produced by other causes. Hence they afford very unreliable testimony.

Among the recently-considered signs was mentioned that of Jacquemier,—the slate or purple color of the vagina. Anything which impedes the circulation may cause this appearance. Dr. Joseph Taber Johnson has made a good suggestion. He thinks the principle of the telephone could be used to hear much earlier than usual the feeble sounds of the fœtal circulation. Dr. S. C. Dunn thinks he can diagnosticate pregnancy as early as the fourth week by the odor of the vernix caseosa upon the examining finger. Dr. E. C. Gehrung was able to make the diagnosis by the fifth or sixth week by the sensation imparted upon touching the ovum with the sound. This is rightly condemned as dangerous practice, while it may be simulated by a polypus or other foreign body in the uterine cavity, and in the early weeks the ovum is attached only to parts of the uterine walls, and the sound may glide by it. Pinard and Didsbury have mentioned a gingivitis which begins about the second month. Jerrisenne, basing his observations on the law formulated by Graves that in hypertrophy of the heart the radial pulse remains the same whatever the position of the body, maintained that instead of the usual variation of from ten to twenty beats in the non-pregnant woman, the pulse of the impregnated woman remains the same. The essayist and others had investigated this symptom and found it quite unreliable. Dr. H. D. Fry thinks that a rise in temperature of the canal cervix to one degree or more above the temperature of the axilla is a strong presumptive evidence of impregnation, provided there is no local disease. The author had found this true, but had found the rise of temperature in the vagina to be of less value.

To Hegar of Freiburg we are indebted for the new sign of great promise which bears his name. This consists in an unusual resilience, compressibility, softness, bogginess, yielding, and thinning of the lower uterine segment: that is, the section immediately above the insertion of the ligamenta sacro-uterina. The shape assumed is that of a fan, balloon, or jug. The change is most apparent in the median line. According to Gempsa, the examination should be made as follows. The thumb is introduced into the vagina until it reaches the cervix, and the index-finger into the rectum until it reaches the ligamenta sacro-uterina; the other hand is placed over the abdomen immediately above the symphysis, and pressed down towards the finger in the rectum. The rectal finger explores the cervix and the lower uterine segment in all its parts, and lastly the higher parts of the uterus. The examination is facilitated by pulling down the uterus with the volsella and evacuating the bladder and rectum. The author thought this mode of examination thorough, yet repulsive to both patient and physician, as well as a difficult and hazardous procedure. He thought it quite possible in the majority of cases to make out all that is necessary with the finger in one of the culs-de-sac and the other hand externally. If this is not sufficient, it might be quite proper to make the examination as above described.

The bladder distended with urine and the uterus with menstrual blood may simulate Hegar's sign. These, however, can be easily excluded. Hyperplasia would show increased density; subinvolution would increase the longitudinal as well as the transverse diameter. In marked retroversion a careful

examination per rectum is often necessary to find the sign.

Dr. Reinl, formerly assistant to Hegar, says, "Among the twenty-two cases I missed this sign but twice, and found it earliest in the fifth week of pregnancy." Dr. Campos, present assistant to Hegar, has reported six cases. Dr. E. H. Grandin, of New York, reports eighteen cases, and says he can make the diagnosis prior to the eighth week by Hegar's sign alone. The author had a number of cases under observation, most of which had not yet had time to develop. One, a widow, acknowledged the opportunity and believed herself pregnant. Repeated examination failed to find Hegar's sign, and she was assured that she was not pregnant. After thirteen weeks the menses returned, and were normal in amount and duration. The other was a young wife, who, after a four months' absence from her husband, returned to him February 9. She soon came under the author's care, and her case required a digital and specular examination two or three times per week. Three times in the sixth week Hegar's sign was made out. March 31, forty-eight days after her return, she miscarried.

There remains to us, then, to lament again our inability in many cases to make a positive diagnosis of early pregnancy; to mourn the fallibility of many of the new and all of the old symptoms; to recommend especially the sign of Hegar, which until now has proved itself impregnable; and to plead for investigation in a field which should not be "barren or unfruitful" [whatever may be its effects upon the pregnant woman.—ED. *P. M. T.*].

Dr. C. R. Reed, of Middleport, Ohio, read a paper on

THE IMPERATIVE NECESSITY OF ABDOMINAL SECTION, AS ILLUSTRATED BY AN UNUSUAL CASE OF OVARIOTOMY.

An ovariotomy to attract the attention of the profession at present must be unique and have some features of peculiar interest. The essayist reported a case showing the necessity of operation, and claimed that the death of the patient would have been inevitable but for the abdominal section, which at once made the diagnosis clear and the treatment plain. The case suggested the following questions:

1. Was the ovarian cyst, with its attending adhesions to the descending colon, the cause of the obstruction of the bowels?

2. Would the exploring needle have made the diagnosis clear without abdominal section?

3. With the probability of the patient's dying under the operation, would it have been better practice to have tapped with the trocar and deferred the removal of the tumor?

4. As it has been shown by the large experience of Tait and others that abdominal section and exploration is, under antiseptic treatment, attended with little or no mortality, is it not the imperative duty of physicians to open the abdomen in all cases of doubtful diagnosis where general treatment has failed to relieve the symptoms?

5. In all cases of slight enlargement of the abdomen attended with intestinal obstruction, as in this case, should the physician wait until symptoms of apparent dissolution occur before resorting to abdominal section, and should the operation be performed as a means of diagnosis only when the symptoms are urgent?

Dr. Wathen, of Louisville, did not understand why the incision was lengthened from four to eight inches. He thought four sufficiently large. If we have a large, hard tumor or there are many adhesions, it becomes necessary to make a long incision. It is good surgery to make your incision only as large as is necessary. He did not understand why the ligature was left to hang through the lower angle of the uterus.

Dr. Van Emmon, of Kansas City, could not understand why the patient, having stercoraceous vomiting and enlarged abdomen, and threatened with death, had not had her case diagnosticated earlier. Also, why the doctor went into a laparotomy unprepared to make an ovariotomy if found necessary. He did not understand why the patient, unless an opium-eater, was given one-half grain of morphia hypodermically before the anæsthetic. He does not know from the report whether it was a monocyst or a polycyst, or, in fact, whether or not it was an ovarian tumor.

Dr. Joseph Eastman, of Indianapolis, arose to take the part of the gentleman who read the essay. The great question is, What is the physician to do in such emergencies? Practitioners are not in the habit of going about prepared for an ovariotomy. He differed from Dr. Wathen, and thought it was proper to leave the drainage by the lower uterine angle. The fact that the patient recovered is a sufficient justification of the means employed.

Dr. E. W. Cushing, of Boston, supported the last speaker and the essayist. It is an old saying that it is a good bridge that carries a man over. Better to make the opening large enough than to tear the intestines in getting it out. The gentleman is criticised for having no trocar. He was just in the mode. Schroeder and Martin do not use the trocar. They think it only one more instrument to be kept clean, and of no value.

Dr. Crouse, of Iowa, reported a case which was not an ovarian tumor. He and others diagnosticated a unilocular ovarian cyst. They found encysted peritoneal dropsy, probably malignant in character.

Dr. Reed replied that he had been called in consultation, saw the woman only three

minutes before he began to operate, and thought that under the circumstances he did the best that could be done.

Dr. J. F. Y. Paine, of Galveston, Texas, reported

A REMARKABLE CASE OF CONGENITAL ABSENCE OF THE VAGINA AND DELIVFRY PER ANUM.

He was called in consultation by Dr. Sachs in an obstetrical case. He found an imperforate ostium vaginæ, the vagina opening into the rectum, by which channel the menses had obtained their outlet and the child was born. The woman had not known that she was at all different from other women, and her husband was also unaware of the fact. They were married a year, and had both performed the sexual act with ease, comfort, and gratification.

Dr. Willis P. King, of Sedalia, Missouri, made a few remarks on

PELVIC INFLAMMATIONS AND ACCUMULATIONS.

He spoke of the two classes of inflammation, septic and non-septic. He thought most practitioners kept a foci for septic matter in the "hand-grease" in their office: they put this on the finger or sound and pass it into the vagina or uterus, thus carrying in the septic matter. It is better to dip the cotton-wrapped probe into the bichloride solution before passing it into the womb. The proper place to open pelvic accumulations is the lowest point, which is in the vagina.

Dr. George F. French, of Minneapolis, showed a simple device to take the place of a retention catheter: it was made from a rubber tube, and could be made by any one in a few moments. He hoped the gentlemen would try the instrument, and find it of as much use as he had. He had had dangerous hemorrhage from the use of a very small knife. The common insufflator he did not like, because it sucked in the water from the parts and when next used threw it out as septic matter. He recommended the insufflator used by aurists.

Dr. Potter, of Buffalo, recalled his paper read before this Section one year ago on this subject. He spoke of an excellent insufflator shown him by Dr. Gehrung, of St. Louis.

Dr. Harvey, of Indianapolis, advised injections of peroxide of hydrogen.

Dr. S. C. Gordon, of Portland, Maine, thought the uterine sound the most common cause of uterine inflammation. The prevention of the accumulation, he said, was much better than its treatment. He uses no arterial sedatives in inflammation. He believes, with Drs. King and French, that the earlier you evacuate the better.

Dr. W. D. Haggard, of Nashville, Tennessee, urged prophylaxis. He believed the introduction of the sound not unfrequently produces inflammation. If we are more guarded with the use of the sound we will have less inflammation. He asked especially the younger members of the profession to be sure that there was no uterine inflammation: we use intra-uterine medication too frequently.

Adjourned.

THE AMERICAN CLIMATOLOGICAL ASSOCIATION.

THE Third Annual Session was held at the hall of the College of Physicians, Philadelphia, May 10 and 11, 1886.

The meeting was called to order at 3 P.M. by the President, William Pepper, M.D., LL.D., of Philadelphia.

The President delivered an address

ON THE CAUSES AND DISTRIBUTION OF CONSUMPTION IN PENNSYLVANIA.

In reference to the city of Philadelphia, it was said that in a period of twenty-six years it was found that there had been sixty thousand fatal cases out of a total of four hundred thousand deaths, the rate for each year being quite uniform. The rate among negroes was more than twice that of the general population. Among the foreign population the death-rate was also in excess of the people at large. Deducting the deaths among negroes and foreigners, the true mortality among the American race in Philadelphia is much lower than is commonly believed. The percentage of deaths from consumption, as compared with the total number of deaths, is by this method nine and one-half per cent., as contrasted with fourteen per cent., the rate when all classes are included.

A. L. Loomis, M.D., of New York, read a paper on

THE EFFECT OF HIGH ALTITUDES ON CARDIAC DISEASE.

He described six illustrative cases out of a total of twenty-six coming under his observation.

Dr. Loomis then went on to say that in all the cases coming under his observation the ventricular dilatation was unquestionably the cause of the sudden development of distressing symptoms, and that the commencement of the fatal issue seemed to be directly due to the effects on the cardiac circulation of a change from a lower to a higher altitude.

The probable explanation of these cases was then considered, the speaker first referring to the nervous supply of the heart. The quality of the atmosphere which is probably the only operative one under these circumstances is the diminished density. The method in which this acted was then referred to.

The two important factors which lead to permanent cardiac insufficiency are, first, the condition of pulmonary distention consequent upon rarefaction of the atmosphere, and,

second, the resultant condition of the circulating blood.

If the explanation of the effects of high altitude upon the cardiac circulation be accepted, the risk which one with even slight cardiac insufficiency runs by passing from a lower to a higher altitude is certainly very great, and, if the insufficiency is extensive, such changes become immediately dangerous. It must be remembered that cardiac insufficiency may exist in those who give no evidence of it.

Dr. Frank Donaldson, of Baltimore, read a paper entitled

A PRELIMINARY ACCOUNT IN REGARD TO CIRCULATORY AND RESPIRATORY CHANGES OBSERVED IN ANIMALS PLACED IN THE PNEUMATIC CABINET.

The experiments had been performed by Professor H. N. Martin, of Johns Hopkins University, and the writer. The animals employed were rabbits which had been chloralized. It was found—

I. When the animal is breathing air from outside of the cabinet, rarefaction of air within the cabinet causes a marked fall of general arterial pressure, but has no influence on the pulse-rate. The fall of pressure lasts only a short time (ten to twenty seconds), and is often followed by a temporary rise above the normal.

II. This fall of systemic arterial pressure depends on two factors,—greater flow of blood to the skin when the air around the animal is rarefied, and greater accumulation of blood in the lungs when they are distended.

III. Of these two factors, accumulation of blood in the lungs is the more effective, for if the animal breathes air from the cabinet and not from the outside, rarefaction of the air within the cabinet (in this case accompanied by no special expansion of the thorax) has but a trivial effect in lowering arterial pressure.

IV. When the animal is breathing external air, rarefaction of the air within the cabinet usually has no effect upon the respiratory rate nor upon the extent of individual respiratory acts unless the fall of blood-pressure be considerable. If it be considerable, symptoms of anæmia of the medulla oblongata show themselves. In some cases there is more forcible dyspnœic breathing, and in some dyspnœic convulsions similar to those which occur when an animal is bled to death, and due to the same cause,—viz., deficient blood flowing through the respiratory centre.

V. The rapid recovery of general arterial pressure while the animal is still in a rarefied atmosphere, but breathing external air, is probably due to excitation of the vaso-motor centre, which, as is well known, is excited whenever the blood-supply is defective.

VI. The brain, enclosed in a rigid box, which is practically unaffected by variations in the atmospheric pressure, has its circulation more disturbed in the pneumatic cabinet than any other organ, with the exception of the lungs.

VII. Compression of the air within the cabinet while the lungs are in communication with the external air causes a considerable transient rise of blood-pressure. This is probably mainly due to the forcing of the blood from the cutaneous vessels; but there has not yet been sufficient time to investigate this point thoroughly.

VIII. Compression of air within the cabinet while the lungs are in communication with the external air slows the pulse as the arterial pressure rises. This is probably due to excitation of the cardio-inhibitory centre by increased intra-cranial blood-pressure. Further experiments are, however, necessary before this can be positively stated.

IX. In certain cases, when the air within the cabinet is rarefied and the animal is breathing external air, the respiratory movements cease altogether for several seconds. As to the cause of this physiological apnœa we are not yet ready to form an opinion. It may be due to extra accumulation of air in the alveoli of the lung, or to distention of the lungs exciting those fibres of the pneumogastric which tend to check inspiration.

The speaker then laid down some practical rules for the use of the cabinet, based upon the results above given.

Discussed by Drs. Pepper, Bruen, and Hudson.

Evening Session.—Dr. H. F. Williams, of New York, read

A CLINICAL REPORT OF CASES TREATED BY PNEUMATIC DIFFERENTIATION.

With the assistance of Mr. Ketchum, the inventor of the apparatus, a demonstration of the working of the pneumatic cabinet was given.

The speaker then reported forty-five cases in addition to those previously reported, in which he had used the cabinet as a method of treatment. Sixteen cases were reported in detail.

This was followed by a paper by Vincent Y. Bowditch, M.D., of Boston, entitled

TEN MONTHS' EXPERIENCE WITH PNEUMATIC DIFFERENTIATION.

The speaker endeavored to give the clinical results of the treatment in twenty-seven cases since June 30, 1885. Pulmonary phthisis in its tubercular and non-tubercular forms, bronchitis in its acute and chronic forms, with and without emphysema or asthma, and retraction of the lung from long-standing pleuritic effusions, were the diseases which he had treated in the pneumatic cabinet. His experience was such that, although he had been unable to accomplish thus far such brilliant results as some others had claimed, yet he felt convinced of the very marked beneficial

effect of the cabinet in many cases where other means had failed to give relief, and of its curative power in one case of incipient tubercular trouble, and he looked forward with hope to what may be done in the future with this new method of treatment. The speaker said his chief desire was that the profession should investigate the matter thoroughly and with fairness and publish their results, for by this means only can a just estimate of the treatment be established. He felt that it should be intrusted only to a physician's care or to that of a reliable assistant, and that if placed in hospitals the most accurate methods of recording cases should be insisted upon before allowing the cabinets to be used. Carelessness of investigation in the present state of its existence might do infinite harm to a method which may prove, when properly used, of great service.

Dr. I. H. Platt, of Brooklyn, New York, read a paper on

THE PHYSICS AND PHYSIOLOGICAL ACTION OF PNEUMATIC DIFFERENTIATION.

Pneumatic differentiation is the process by which the air surrounding the body and that entering the lungs is rendered of different densities. There are three forms, which, for convenience, may be designated positive, negative, and alternative. I propose to consider chiefly positive differentiation, which is the form in which the air surrounding the body is of less pressure than that entering the lungs. The apparatus introduced to the profession by Dr. Williams and known as the pneumatic cabinet is the most convenient for applying this treatment. As the difference in pressure used is very slight, seldom exceeding that indicated by a fall of one inch of the mercurial column, the absolute change in air-pressure is an insignificant factor, the essential element being the differentiation.

The effect of reduced air-pressure upon the periphery of the body is to increase the expansion of the thorax in inspiration and to diminish its contraction in expiration, consequently to increase the amount of residual air. By the increased pressure in the lung it will tend to exsanguinate them and to raise the arterial blood-pressure in the general circulation.

Two of the claims put forward by Dr. Williams and Mr. Ketchum I believe to be unfounded. The first is, that the effect of removing a slight degree of pressure from the periphery of the body is radically different from that of increasing the pressure of the air entering the lungs,—the former acting as a *vis a fronte*, the latter as a *vis a tergo*. One of the most elementary principles of physics teaches that suction is not a force operating from in front, but is merely the removing the pressure from one side of a body and allowing the undiminished pressure to act upon the other side. It makes no difference whether pressure is taken from the outside of the thorax or added to the inside: in either case it is the unbalanced pressure that causes the increased expansion. The other proposition which I combat is, that the spray or vapor used in conjunction with the differential process can be carried farther into the air-passages or more thoroughly condensed upon them than a spray or vapor could be under normal conditions. They cannot be carried so far for the reason that the residual air is increased, and consequently the inspired air which carries the vapor or spray cannot penetrate so far. It is claimed that the vapor of medicinal substances is condensed in the lungs during the differential process by the compression consequent upon the commencement of the expiratory act. This is impossible: first, because compression only acts to condense a saturated vapor, and the air-passages cannot be saturated with the vapor of a medicinal substance, and, secondly, because no greater compression is produced at the commencement of the expiration under the influence of differential pressure than under other circumstances. Such compression as does occur is due to the resistance offered by friction of the bronchial tubes and by the narrow opening of the glottis, and it is impossible that these should be affected by the differential pressure.

I believe that such benefit as results from the use of the cabinet is due mainly to the reduction of congestion in the lungs by the air-pressure within them, and by the increased expansion and movement of the lungs favoring their greater action and modifying their nutrition.

Tuesday, Second Day, Morning Session.—The First Vice-President, Dr. Frank Donaldson, of Baltimore, in the absence of the President, occupied the chair.

The Report of the Committee on Health-Resorts was received and ordered published in the Transactions.

The first paper, by Roland G. Curtin, M.D., of Philadelphia, was on

ROCKY MOUNTAIN FEVER.

The speaker, in the first place, referred to a communication received from Dr. D. G. Dougan, of Denver, Colorado, bearing upon this subject. The experience of Dr. Dougan had led him to regard all cases of mountain fever as belonging to one or another of the well-known already classified varieties. The cases, however, present variations from the usual course of the fevers to which we would assign them. Some of the cases are ephemeral in character and difficult of classification. The fever especially designated by the name mountain fever presents many features of typhoid fever. Some of the reasons for believing these cases to be an irregular or mild type of typhoid are that such cases are usually seen at the season of the year when typhoid fever is most prevalent, and they occur most commonly

under conditions favorable to the development of typhoid fever; not infrequently cases will present some characteristic feature of typhoid, leaving no doubt as to the diagnosis. In the high altitudes where mountain fever is said to occur, a large proportion of the cases of undoubted typhoid pursue a remarkably mild course. Dr. Dougan concluded with a protest against admitting mountain fever as a specific disease until its right to such a position had been proved by clinical and pathological researches.

In 1863, Dr. Curtin had seen in Wyoming Territory four cases which had been pronounced to be mountain fever. At some point in the disease all these cases had diarrhœa, and in one it was continuous. One of the patients died suddenly at the end of three weeks, but no autopsy was made; in one case there was a doubtful eruption; one of the cases had epistaxis in the beginning of the illness; tympanitis was more or less marked in all the cases. Dr. Curtin considered these cases to be typhoid or typho-malarial in character. Sometimes the cases belong, in all probability, to the class termed simple continued fever. The diagnosis of mountain fever was doubtless in large part the result of incompetency on the part of the observers, and the use of the term is continued largely as a result of fashion.

The opinion of other investigators was cited, all of whom expressed views similar to those given above.

The paper was discussed by Dr. Schauffler and Dr. Bell.

HOW THE THERAPEUTIC VALUE OF OUR MINERAL WATERS MAY BE INCREASED,

was the title of a paper by Dr. C. C. Rice, of New York.

The following conclusions were advanced:

1. Physicians should make a careful analysis of our mineral springs.

2. The medicinal values of the waters should be tested by clinical investigation, and the conclusions published for the benefit of the profession.

3. If the waters are found to present marked merit, the physician should interest himself in developing the springs, improving the bath-houses, etc.

4. Physicians in sending patients to the springs should be more careful to select the proper water, and should send with the patient the diagnosis and history of the condition, for the benefit of the physician at the baths.

5. The patient while at the baths should be under a more rigid medical discipline.

6. The social life of our watering-places should be reorganized.

The following papers, describing the climate of various places, were then read:

"The Climate of Mexico," by Dr. Didama, Syracuse; "The Southern Adirondacks," by Edward T. Bruen, M.D., Philadelphia; "The Climate of El Paso, Texas," by Dr. E. W. Schauffler, Kansas City; "Southern Pine Park, a New Health-Resort in North Carolina," by Dr. A. N. Bell.

Tuesday Afternoon: Business Meeting.—The following officers were elected:

President.—Dr. Frank Donaldson, Baltimore.

First Vice-President.—Dr. V. Y. Bowditch, Boston.

Second Vice-President.—Dr. Roland G. Curtin, Philadelphia.

Secretary and Treasurer.—Dr. J. B. Walker, Philadelphia.

Additional Member of Council.—Dr. F. C. Shattuck, Boston.

Elected to Membership.—Dr. F. Donaldson, Jr., Baltimore; Dr. G. R. Butler, Brooklyn; Dr. W. Matthews, U.S.A.; and Dr. J. H. Musser, Philadelphia.

The following Memorial was presented by Dr. J. Ewing Mears, Secretary of a Special Committee of the American Surgical Association, appointed to consider the proposition with reference to the establishment of a

CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

WASHINGTON, D.C., April 30, 1886.

To the President of the American Climatological Association:

In view of the fact that there are a number of special medical organizations now in existence in the United States, each having for its aim and attainment the advancement of the special department of medicine for which it was organized; and since the members of said special Societies are of the representative men of the profession in America, many of whom are at the same time Fellows or members of several of these special Societies, which double membership, if it may be so expressed, necessitates them, if desirous of attending two or more of the meetings of these special Societies the same year, to make as many separate trips from home, and often with much loss of time to themselves and inconvenience to their patients; therefore it appears necessary that some arrangement should be made with the different Societies as to a uniform time and place of holding their sessions, so that those members who wish to attend the meetings of more than one Association may be enabled to do so without useless expenditure of money or unnecessary loss of time.

An extended correspondence, together with personal conference with many of the most prominent of the Fellows of this and other of the Associations, has disclosed the fact that there is a decided and growing inclination to unite the various Societies into a common whole, whereby it would become a general organization, representative of the various special departments of the profession in America.

The plan proposed, and which is offered for consideration, is to unite the following-named Associations into a Congress based upon the outlines which are now to be explained: American Surgical Association, American Ophthalmological Association, American Otological Association, American Neurological Association, American Laryngological Association, American Gynæcological Association, American Dermatological Association, American Climatological Association, and American Clinical and Pathological Association,—these Associations to be united under the name and style of "The Congress of American Physicians and Surgeons."

The plan of organization hereby submitted, and subject to any alterations or amendments which may be deemed wise and proper, is that each Society shall preserve its own name, constitution, and by-laws, elect its own officers and Fellows, hold its own sessions apart from the others at the time and place of meeting, publish its own Transactions, and do all other acts which, by virtue of its constitution and by-laws, it has the inherent right to do, thus preserving its own autonomy.

The Congress to be composed of these special Societies when in convention, and its meetings to be held annually in the city of Washington,—the most appropriate place for the assembling of such an organization. The constitution and by-laws of the Congress to be formed by a committee composed of a like number chosen from each separate Society; the opening session of each annual meeting of the Congress to be devoted to such general business as may pertain to the interest of the Association as a whole; the Congress to be presided over by a President, elected annually, who shall deliver the opening address upon the first day of the session; the manner of choosing the President to be as follows: by a nominating committee composed of one member elected from each special Association, or otherwise, as may be determined upon by the special Society itself; this committee nominating one or more candidates for the office of President, whose election is to be by ballot on the last day of the annual session, and in a convention of all the Societies assembled; the Presidents of the special Societies to become *ex-officio* Vice-Presidents of the Congress; membership in the Congress to be acquired only by virtue of Fellowship in one or another of the special Associations; other officers of the Congress to be elected or appointed as may hereafter be determined upon by the Associations in convention.

These are the outlines of a union proposed for the consideration of the members of this Association, which, if it should meet their approval, can be submitted to the action of the Societies which have been mentioned. It was suggested that the Chair appoint a committee of five to bring the subject before the next special Association which meets this spring or coming summer, and which, in the event of a concurrence of opinion on the part of said Society, shall act in concord with their committee appointed to confer with the other Societies, in the order of their meetings. This Enlarged Committee to report at a convention of all the Societies, which shall be requested to hold their next annual meetings at the same dates in the month of June, 1888, in the city of Washington.

To avoid any confusion as to the time of next meeting, each Society (this year) could adjourn to meet in June, 1888, leaving the date to be fixed by the Enlarged Committee after their work of conference had been finished, it then being only necessary to apprise the Secretaries of the respective Associations, who will give notice to the various Fellows or members.

This proposition is the result of calm consideration, and has been approvingly endorsed by quite a number of the representative gentlemen of the profession both in and out of this special Association.

The plan proposed is simply to unite into one great body the already-existing special Societies, and it is proposed from the honest conviction that such a union will prove of inestimable benefit to them individually and collectively.

The special committee appointed by the American Surgical Association to consider the above memorial reported that it viewed with great satisfaction the perfection of a plan through which the meeting of the Associations above named in the city of Washington at the same time of the year may be accomplished, and the meeting of all the Associations in general assembly on such days as may be determined, for the purpose of delivering of addresses upon general subjects in medicine, such meetings to be held without any formal organization through which the Associations meeting will sacrifice their autonomy.

To accomplish these purposes the committee offers the following resolution:

"*Resolved*, That a committee of five Fellows of this Association be appointed, which shall be authorized to confer with committees of other associations interested in the adoption of a plan of a convention as hereinbefore stated, and report upon the same at the next meeting for the action of the Association."

The resolution was adopted, and the following committee was appointed in accordance therewith: C. H. Mastin, M.D., Mobile, Chairman; C. T. Parkes, M.D., Chicago; J. Ford Thompson, M.D., Washington; N. Senn, M.D., Milwaukee; J. Ewing Mears, M.D., Philadelphia, Secretary.

A committee, to be announced later, was appointed to confer with committees of other special organizations.

Dr. Henry Baker, of Lansing, Michigan, read a paper on

THE CAUSATION OF PNEUMONIA.

The conclusions reached by the author were based upon a series of investigations continued over a period of eight years. The observations were in regard to the relation of meteorological conditions and the occurrence of pneumonia. These led to the conclusion that pneumonia was directly or indirectly associated with a comparatively low temperature. Cold air contains but little moisture; but as it is warmed in the lungs the capacity for moisture is increased, and its demand for water is increased. The fluid exhaled contains chloride of sodium, which is deposited in the air-cells, greatly increasing the salinity of the liquid present. The salt is irritating, and this may be one influence in the production of pneumonia. The presence of the increased salinity probably favors the exudation into the lungs of the albuminous constituents of the blood.

Dr. J. H. Musser, of Philadelphia, read a paper entitled

SUGGESTIONS REGARDING THE PREVENTION OF PHTHISIS IN MILL-HANDS.

The speaker stated that it was rather to prevent that state of the system which often leads to phthisis that he desired to make some suggestions. The suggestions more particularly referred to factory-laborers. He showed that states of ill health were common in this class of artisans, and asserted that it was very largely due to an inadequate supply of food, which was improperly selected and prepared, and to carelessness in attention to digestion. This cause obtained more largely than bad hygienic surroundings or than the occupation itself.

If this be true, the remedy proposed was to have the plan of the Willimantic Cotton Company used by all mill-proprietors. That company has proved by experience and careful calculation that it pays them in quality and quantity of work done to supply milk to their boys and bouillon to their women twice daily, and that the health of the operatives is promoted and their lives prolonged thereby. Dr. Musser trusted that the members of the Society could influence proprietors to adopt this plan, and thereby close one of the avenues to disease and death.

Dr. C. L. Dana, of New York, read a paper entitled

A STATISTICAL INQUIRY REGARDING THE RELATION OF HIGH ALTITUDES TO NERVOUS DISEASES.

The speaker presented the results of inquiries made at his request of twelve physicians living in Colorado Springs, regarding the effects of high climates on the nervous system in health and disease. The majority thought that chorea in children was more frequent there than in lower altitudes; that the climate was bad for nervous women. The high altitudes do not necessarily injure epileptics, and in anæmic cases might cause improvement. Insomnia dependent upon anæmia and malnutrition was benefited and generally cured. The climate has no specific influence for good upon diseases of the spinal cord, but rather, if anything, the contrary. The speaker was of the opinion that high altitudes had a tendency to excite lithæmia and arthritism, with consequent irritating effects upon the nerve-centres. The best effects of the climate were seen in anæmic insomnia, neurasthenia, and melancholia.

Dr. G. R. Butler, of Brooklyn, read a paper on "Mitral Stenosis," giving the histories of fourteen cases.

The President announced as the committee to confer with the committees of other special societies with reference to the establishment of a Congress of American Physicians and Surgeons: Dr. A. L. Loomis, New York; Dr. F. Donaldson, Baltimore; Dr. F. C. Shattuck, Boston; Dr. E. T. Bruen, Philadelphia; and Dr. W. W. Johnson, Washington.

It was resolved to appoint a committee of three, with Dr. C. C. Rice as chairman, to investigate the therapeutical properties of the different mineral springs.

After passing a vote of thanks to the College of Physicians for the use of its hall, the Society adjourned *sine die*.

NEW REMEDIES AND CLINICAL NOTES.

SUICIDE DURING INSANITY NOT A FELONY.—A recent suit against an Accident Insurance Company brought up a question of great importance. It was whether the representatives of a man who committed suicide could recover on a policy which expressly excepted liability in a case of the kind. The case would seem to be a clear one in favor of the company; yet most suits involving the point are decided in favor of the suicide. It is generally the case that suicides are insane, or, at least, there are sufficient circumstances to lead a jury, usually favorable to the plaintiffs, to assume that the deceased was insane. If insanity is proved, the courts hold that the exception in the policy does not apply. In the case specially referred to, the court (Judge Dyer, of Wisconsin) held that "the act of suicide was no more the man's act in the sense of the law than if he had been impelled by an irresistible physical power."

MISCELLANY.

INTERNATIONAL MEDICAL CONGRESS.—The Executive Committee has nominated the following as officers of the Congress of 1887:

President.—Nathan S. Davis, of Chicago, Illinois.

Vice-Presidents.—William O. Baldwin, Alabama; William Brodie, Michigan; W. W. Dawson, Ohio; E. M. Moore, New York; Tobias G. Richardson, Louisiana; Lewis A. Sayre, New York; J. M. Toner, Washington, D.C.; the President of the American Medical Association; the Surgeon-General of the U.S. Army; the Surgeon-General of the U.S. Navy; the Supervising Surgeon-General of the U.S. Marine Hospital Service.

Secretary-General.—John B. Hamilton, of Washington, D.C.

Treasurer.—E. S. F. Arnold, of New York.

Chairman of the Finance Committee.—Frederick S. Dennis, of New York.

Presidents of Sections.—

I. General Medicine: A. B. Arnold, Baltimore, Maryland.

II. General Surgery: William T. Briggs, Tennessee.

III. Military and Naval Surgery: Henry H. Smith, Pennsylvania.

IV. Obstetrics: De Laskie Miller, Chicago, Illinois.

V. Gynæcology: James H. Harrison, Virginia.

VI. Therapeutics and Materia Medica: F. H. Terrill, California.

VII. Anatomy: William H. Pancoast, Pennsylvania.

VIII. Physiology: J. H. Callender, Michigan.

IX. Pathology: A. B. Palmer, Michigan.

X. Diseases of Children: J. Lewis Smith, New York.

XI. Ophthalmology: E. Williams, Cincinnati, Ohio.

XII. Otology: I. J. Jones, Chicago, Illinois.

XIII. Laryngology: W. H. Daly, Pittsburg, Pennsylvania.

XIV. Dermatology and Syphilis: A. R. Robinson, New York.

XV. Public and International Hygiene: Joseph Jones, New Orleans, Louisiana.

XVI. Collective Investigation, Vital Statistics, and Climatology: Henry O. Marcy, Boston, Massachusetts.

XVII. Pathological Investigation and Nervous Diseases: John P. Gray, Utica, New York.

XVIII. Dental and Oral Surgery: Jonathan O. Taft, Cincinnati, Ohio.

PERSONAL.—Dr. Edward Curtis has resigned from the chair of Materia Medica and Therapeutics in the College of Physicians and Surgeons, New York, and Dr. George L. Peabody has been elected as his successor.

THE first number of a large double-column sixteen-page journal, entitled the *New York Medical Monthly*, has come to hand. J. Leonard Corning, M.D., is its editor, and there is a goodly list of contributors. It has not been published "to meet a long-felt want," but proposes to create such a want by original methods and good work. The price is one dollar per annum.

DR. DUDLEY S. REYNOLDS, of Louisville, Kentucky, will begin the publication about the 15th of June of a monthly medical journal in the interest of students, to be styled *Progress*. It will beyond question be a live journal, and we wish it success.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 9, 1886, *TO MAY* 22, 1886.

MAJOR DAVID L. HUNTINGTON, SURGEON.—Ordered to proceed from this city to David's Island, New York Harbor, on public business connected with the reconstruction of the present hospital building at that depot, or the erection of a new one. On completion of this duty, to rejoin his station. S. O. 109, A. G. O., May 10, 1886.

CAPTAIN F. W. ELBREY, ASSISTANT-SURGEON.—Sick-leave of absence still further extended one year, on surgeon's certificate of disability. S. O. 115, A. G. O., May 17, 1886.

CAPTAIN JAMES A. FINLEY, ASSISTANT-SURGEON.—Ordered for duty at Fort Buford, Dakota Territory. S. O. 39, Department of Dakota, May 5, 1886.

CAPTAIN WILLIAM F. CARTER, ASSISTANT-SURGEON.—Granted leave of absence for one month, to take effect about June 1, with permission to apply for an extension of one month. S. O. 55, Department of Texas, May 11, 1886.

CAPTAIN JOHN M. BANISTER, ASSISTANT-SURGEON.—Assigned to duty as post-surgeon, Fort Canby, Washington Territory. S. O. 75, Department of Colorado, May 8, 1886.

CAPTAIN R. B. BENHAM, ASSISTANT-SURGEON.—Ordered to Department of the Platte. S. O. 109, A. G. O., May 10, 1886.

FIRST-LIEUTENANT C. B. EWING, ASSISTANT-SURGEON.—Relieved from duty at Fort Leavenworth, Kansas, and ordered for duty as post-surgeon, Fort Supply, Indian Territory. S. O. 45, Department of Missouri, May 13, 1886.

CAPTAIN A. V. CHERBONNIER, MEDICAL STOREKEEPER U.S. ARMY.—Granted leave of absence for four months, with permission to apply for four months' extension. S. O. 109, A. G. O., May 10, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM MAY 9, 1886, *TO MAY* 27, 1886.

SURGEON J. F. BRANSFORD.—Invalided home from Pacific Station.

SURGEON GEORGE F. WINSLOW.—Ordered, June 1 proximo, to the U.S.S. "Atlanta."

PASSED ASSISTANT-SURGEON A. C. HEFFINGER.—Detached from the Navy-Yard, Portsmouth, New Hampshire, and ordered to U.S.S. "Atlanta" June 1.

SURGEON H. L. LAW.—Ordered to the U.S.R.S. "Wabash."

SURGEON J. A. HAWKE.—Detached from U.S.R.S. "Wabash" and await orders to sea.

ASSISTANT-SURGEON F. N. OGDEN.—Detached from U.S.S. "New Hampshire" and await orders.

ASSISTANT-SURGEON J. W. BAKER.—Ordered for examination preliminary to promotion.

CHARLES E. WOODRUFF.—Commissioned Assistant-Surgeon in the Navy May 17.

CHARLES P. HENRY.—Commissioned Assistant-Surgeon in the Navy May 18.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JUNE 12, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON CHOREA; WITH REMARKS ON INFANT-FEEDING.

Delivered at the Children's Hospital, Philadelphia,

BY ARTHUR V. MEIGS, M.D.,

Physician to the Hospital.

Reported by WILLIAM H. MORRISON, M.D.

GENTLEMEN,—It is scarcely worth while for me to tell you what is the matter with this little girl, as it is very evident that it is a case of chorea of unusual severity. The child is 10 years of age, and had smallpox three years ago, but has never had rheumatism and never had chorea before. The present illness began two months ago, and during the past two weeks has greatly increased in severity. She is unable to walk or stand, and when the attempt is made she is thrown to the floor by spasmodic action of the muscles. As you observe, the choreic movements are bilateral, although decidedly more marked on the left side. When she attempts to make any voluntary movement, as giving me her hand, the jerking and twitching are greatly exaggerated.

Examination of the heart shows that its action is fairly calm, although a little irregular. There are five or six beats at one rate, and then five or six more rapid ones, but no positive murmur can be heard. The irregularity of the heart is no more than might be expected in consequence of the constant jerking of the muscles. There is a slight murmur with the first sound at the apex, but this is not a positive indication of organic disease, although endocarditis is a very common accompaniment of chorea.

The diagnosis in this case is of course easy, and can be made at a glance, and in all fully-developed cases of this complaint it is readily made. In the very beginning of the disease it is sometimes difficult to distinguish between it and the slight nervous jerking which is natural to some children of a nervous disposition. Again, it is sometimes difficult to make up your minds as to the nature of the case when the affection takes what is called the paralytic form. Occasionally, in children an apparent attack of paralysis is really chorea. I have myself never seen a case of this kind, but such cases are on record, and there is no doubt that they occur. The true nature of the affection may be determined by noting the fibrillary twitching in the apparently-paralyzed muscles. In all cases of paralysis in children, the possibility of the case being of these unusual forms of chorea should be considered.

Prognosis.—In cases of uncomplicated chorea, especially in children, the prognosis is almost always favorable. It is very unusual for a child to die of the disease, and I have never seen such a case. In this instance the affection is apparently uncomplicated, and the prognosis therefore good. Last year I attended a child with chorea accompanied with acute articular rheumatism and unusually extensive pericarditis. Later, this child developed chorea, but ultimately recovered and is now apparently well, and I can discover no disease of the heart, yet from the severity of the pericarditis, which was so great that the friction-sounds could be heard before the ear touched the chest, it is very likely that there are pericardial adhesions.

With reference to treatment, there has been a great advance made in the last few years. The mode of treatment now employed is safe, and seems to have a greater influence over the disease than any other method which has been employed. There have been a multitude of drugs used in this affection; in fact, nearly all the drugs in the pharmacopœia have been employed at one time or another. For many years arsenic has been regarded as of great service in this affection, but within the past few years a new mode of administering it in chorea has been recommended, which is as follows. The parents should be given a bottle of Fowler's solution, with directions to use it only as ordered, for the drug is poisonous. They should have written directions to this effect. Give the child three drops three times a day, directly after meals, to-day; to-morrow, give four drops after breakfast and three drops after dinner and supper; the following day, give four drops after breakfast and dinner and three drops after supper; the next

day, four drops three times a day; the succeeding day, give five drops after breakfast and four drops after dinner and supper. In this way the dose is to be gradually increased until ten drops three times a day are given, or until the constitutional effects of the drug are manifested. These are puffiness of the face, particularly of the under eyelids, pain in the stomach, and diarrhœa. Upon the appearance of any one of these symptoms the dose should at once be reduced to three drops three times a day, and then gradually increased again, or, if necessary, the drug may be entirely discontinued for a few days. If used in this way, arsenic is perfectly safe and can do no harm. The dose should be kept at a point just short of producing constitutional symptoms.

This child should also be put at perfect rest in bed. She is unable to stand or walk, and is liable to violent falls. As you have seen, any attempt to execute a voluntary movement throws the child into a perfect spasm. This so exhausts the muscles and the vital energies as to make it important that she should be put at rest. In regard to diet, any ordinary wholesome food may be given.

I might say that in some cases there is complete loss of speech; and this was present in the case I described to you. This child appears, however, to have complete control of speech. Even when loss of speech is present, the prognosis is favorable if the case is otherwise uncomplicated.

INFANT-FEEDING.

I wish now to say a few words upon the subject of infant-feeding, and I think no more important question can be brought to your attention. In this way we can do more for the advantage of babies and children than by any other means. For children more good probably can be done in this way than for adults, although the same attention has not been bestowed upon the subject by physicians, and there is no uniformity of conclusion as to what should be done for children. There have been many works on diet written, but they have been principally for adults. There is a lamentable difference of opinion as to how young infants should be fed. When we consider the fact that in the year 1883 more than one-third of the total number of deaths in the city of Philadelphia were of children under one year of age, it seems to me to be self-evident that many of these deaths were the result of an injudicious diet and were preventable. This is, therefore, a subject which we should study, and from the study of which we may hope for much towards the improvement of medicine. There is no doubt that the best results are attained when the child is nursed, either by its mother or by a wet-nurse. In the absence of human milk, we should give something approximating it as nearly as possible in composition. To do this we must first ascertain what is the composition of human milk. Milk, whether that of woman or of the cow, contains five ingredients: water, fat, casein, sugar, and salts. Every complete dietary must contain all these different elements. We must take into our bodies a certain amount of water, of fat, of nitrogenized matter (which corresponds to the casein of milk), of sugar and starch, and of inorganic matters, such as chloride of sodium, phosphates, etc.

The difficulty we have had to contend with in the past has been that there is no agreement in regard to the composition of human milk. Until lately, physiologists have usually rated the casein in human milk at about three per cent., which is too high. My analyses lead me to rate it at about one per cent. Other modern analysts rate it at two per cent. Our conclusions in regard to this point must determine our decision in regard to what is the best food for infants, and whether we shall give cow's milk pure or diluted, and how much diluted. It is, therefore, a very important point. Many physicians direct that the new-born baby shall be given pure cow's milk; but this I consider under no circumstances admissible. Cow's milk contains three or four per cent. of casein, and this proportion is too much, and must be reduced. An appropriate food is that prepared according to the following formula:

Two tablespoonfuls of cream;
One tablespoonful of milk;
Two tablespoonfuls of lime-water;
Three tablespoonfuls of sugar-water.

The sugar-water is made by dissolving seventeen and three-fourths drachms of sugar of milk in a pint of water. This produces a food more nearly resembling in composition human milk than anything of which I know. There are other foods

which approach this very nearly in composition, and I do not say that it is the only one that may be employed; but I must raise my voice, however, against the use of cow's milk, either pure or reduced with one part of water, for very young infants. If only moderately diluted, it contains too much casein; if sufficiently diluted to reduce the casein to the proper amount, there is too little fat.

Three months ago I was called to see a child, then 2½ months old, which had been hand-fed from birth. I learned that it had been fed on condensed milk, a preparation of which I do not approve, although it sometimes answers a useful purpose. The first thing I told the parents to do was gradually to give up the condensed milk, and substitute the preparation the formula of which I have given. The nurse was a woman who had had charge of children under similar circumstances, and had her own views about the proper methods of feeding. The substitution was made, but the food did not seem to agree entirely: still I advised that its use should be persisted in. Some time later, when I called, I learned that for the previous four days the baby had been given a mixture suggested by the nurse, and which had agreed perfectly. This consisted of two parts cow's milk and one part water. As the child seemed to be doing well, I made no objection, for it is a good rule when a child thrives on any particular food, no matter what it is, to let well enough alone. About two months after this I was again sent for, to find the child somewhat out of sorts. I saw it from time to time until a short time ago, when it was five months of age. The child then had a cold in the head, with some hoarseness and cough, for which I prescribed; but the same afternoon I was sent for, to learn that it had had a convulsion. When I saw it, it had no fever, and seemed to be as well as before the occurrence of the convulsion. In the course of two days the child had five convulsions, lasting from five to ten minutes. After these passed off, it seemed immediately as well as before the attacks. I learned that there had been constipation, and that the movements were white and thick, almost like putty, and that it had been necessary to give large doses of medicine to act on the bowels. I inferred from this that there had been an accumulation of the excess of casein in the intestinal canal, and ordered a mixture of three tablespoonfuls of castor oil with five of simple syrup of rhubarb, a teaspoonful of this to be given every two hours. In the course of two days the child took nine teaspoonfuls of castor oil and fifteen of the simple syrup of rhubarb, and it was only then that the bowels began to act freely. These movements consisted of the putty-like material which has been described. In cases of fæcal accumulation rapidly-acting purgatives will not have the desired effect. It is necessary to give something that may be administered several times a day, and, if it is not vomited, the mixture mentioned acts very well. In adults, a pill containing two grains of compound extract of colocynth or a little aloes and rhubarb will answer the same purpose. I have seen such a pill given three times a day for three weeks without producing excessive action of the bowels.

In the case I have detailed, the trouble was undoubtedly the result of the method of feeding introduced by the nurse. As the preparation which I had first suggested did not seem to answer the purpose perfectly, I ordered the following:

Two tablespoonfuls of cream;
One tablespoonful of milk;
Two tablespoonfuls of lime-water;
Three tablespoonfuls of water;
One level teaspoonful of Mellin's food.

Mellin's food is the only one among the artificial foods that I use. Horlick's food I believe has the same composition, but I have not used it. Under this treatment the condition of the child has much improved.

The use of cream in infant-foods has been objected to by a well-known New York physician, on the ground that microscopic examination of the stools of children so fed showed the presence of undigested fat. He also states that undigested fat is found in the stools of healthy babies nursed by healthy mothers, and suggests that perhaps nature has placed an undue proportion of fat in human milk. The criticism seems hardly well sustained, and the discovery of undigested fat in the stools of babies fed upon cream appears rather to be a reason to continue its employment, for certainly better results are attained by nature than by any of our artificial means.

ORIGINAL COMMUNICATIONS.

REPORT ON THE PROGRESS OF PATHOLOGY.

BY J. H. MUSSER, M.D.

(Continued from page 635.)

EVOLUTION IN PATHOLOGY.

SINCE the principles of biology were formulated or demonstrated by Darwin, Huxley, Spencer, and their co-workers, pathologists have endeavored from time to time to classify the facts of morbid morphology in such manner as to bring them in harmony with the general laws of biology. The philosophic work of Cohnheim, the charming essays of Paget, the labors of Creighton and others, attest this. Lately, Mr. J. Bland Sutton, F.R.C.S., in the Erasmus Wilson Lectures on Pathology,* took the above subject for his text.

Mr. Sutton is known by his frequent contributions to comparative pathology, and it is needless to say that his knowledge of this branch of the science, as well as of comparative anatomy and embryology, was largely drawn upon. Only a brief presentation can be made of his facts and arguments.

His first lecture was on "Correlation and its Effects," basing his remarks on the principles of evolution enunciated by Huxley in three laws: I. There has been an excess of development of some parts in relation to others. II. Certain parts have undergone complete or partial suppression. III. Certain parts which were originally distinct have coalesced. For example, in embryonic life every animal possesses male and female generative organs in a potential form; either those peculiar to the male or the female gain the ascendency,—an excess of development illustrating the first law. The opposite set of organs are suppressed or disappear completely (second law). In fishes, reptiles, and birds the female generative ducts are represented by oviducts (Müllerian), and in mammals the oviducts fuse in the middle line, constituting a median uterus, or parts originally distinct coalesce (third law).

Expressing the same laws in the terminology of pathology, the lecturer desired to show that structural aberrations of animal bodies follow these principles. He reduced the laws to two: I. Correlation —*a*, hypertrophy (law 1); *b*, atrophy (law 2); II. Coalescence (law 3). "Correlation leads to abrogation of functions and gives rise to rudiments." Hypertrophy must be distinguished from simple overgrowth. True hypertrophy is "the enlargement of an organ beyond its usual limits as the result of increased function or of some unusual condition of the corresponding or correlated organ;" *e.g.*, the enlarged kidney in cases in which the fellow-organ has been destroyed, the enlarged fibula in cases of ununited fracture of the tibia. Corns are examples of hypertrophy resulting from intermitting pressure. The ischial callosities seen in some monkeys are pathological productions transmitted so as to become race-peculiarities. Simple overgrowth is illustrated by the overgrown nail of the great toe seen often in old bedridden females. The relation of hypertrophy and atrophy Mr. Sutton terms correlation. In the production of hypertrophy, function and blood-supply are inseparably united. The nutrient stream is thus diverted from another channel, causing atrophy of the organ supplied by it. Example: in the human fœtus the tibia and fibula are of nearly the same diameter; and in the menobranchus, which uses its legs to paddle, the two bones are of equal thickness; but "when the water-animals began to take to the land, the weight of the body was far more conveniently transmitted to the ground by one bone than by two; the increased function led to increased blood-supply," and the tibia hypertrophied. The increased nutritive supply to the tibia, by causing diversion of the blood-stream, leads to atrophy of the fibula.

Mr. Sutton believes a division of animals into those that are males and females is due to the law of "correlation." The fact that hypertrophy is one of the causes of division of sexes he summarizes as follows: 1. In the lowest forms of animal life hermaphroditism is the prevailing condition. 2. Cross-fertilization in hermaphrodites is the rule, and may lead to a division into sexes within the limits of a single group (Myzostomida). 3. Sporadic cases of adult hermaphroditism are far more common in the lowest forms of animal life. 4. If in mammals both sets of

* Lancet, February 13, 20, and 27, 1886.

organs grow concurrently, the individual is sterile. 5. Both sets of organs grow equally to a definite period in embryonic life. 6. Reproduction in vertebrata, so far as is known, is impossible unless hypertrophy of one set of organs occurs.

Further illustrations of the wonderful correlation which exists between hypertrophy and atrophy were given, and the law announced that hypertrophy of one organ or set of organs leads invariably to atrophy of some other organ (from diversion of the nutrient fluid).

Lecture II. "The Inflammatory Process."—Inflammation was defined as *the method by which an organism attempts to render inert noxious elements introduced from without or arising within it.* These noxious elements are termed irritants. Vascular disturbance is the most important feature of the inflammatory process, but Mr. Sutton looks upon the functions displayed by active motile cells as the fundamental basis. The amœboid movement, the power of ingestion, and the power of intracellular digestion of cells are detailed, illustrated, and proved to be functions utilized in the inflammatory process. The formation of giant-cells is due to the fusion of two or more cells,—leucocytes. In invertebrates they arise always around foreign bodies. Metschinoff has shown that in the early stages of absorption of the tails of larval batrachians a large number of amœboid cells are present, within which are seen remnants of nerve-fibres and fragments of muscle. In reality, leucocytes are engaged in devouring the tail of the tadpole. The same observer witnessed "contests between the white cells of the blood and bacteria in the daphnia, and, when one cell was not sufficient to attack the invading bacterium, two or more would fuse together, surround, digest, and thus rid the daphnia of the intruder." Sutton applies these facts to mammals. Leucocytes, it is well known, crowd around an irritant. In tubercle, leprosy, perlsucht, etc., the lesions swarm with bacilli. These organisms are often taken up by cells, and especially by giant-cells. The creation of the giant-cell is an effort of the blood-corpuscles to rid the tissues of noxious elements. Osteoclasts come under the same category.

Mr. Sutton then states the kinds of inflammation to be simple and specific. The first is due to the reaction that follows mechanical, thermal, or chemical stimuli; the second, to a particular poison, as that of variola, glanders, tubercle, etc. The infective granulomata (tuberculosis, leprosy, syphilis, glanders, actino-mycosis, etc.) illustrate the reaction of the organism to a specific virus. The histological characters of these morbid formations are practically identical: "a soft tissue, made up almost entirely of round cells, very little intercellular substance, the presence of giant-cells, and in most of them a bacillus, or a fungus, is a constant feature." The infectiveness of this irritant is pronounced: it may be inoculated and cultivated. A study of the most important groups of the vertebrata proves to Mr. Sutton that the mode by which a piece of noxious tissue is encapsuled or cast out of the body is an illustration on a large scale of the process by which bacilli, bacteria, etc., are in some cases rendered inert by cell-activity. If the vitality of the organism is enfeebled and the number of invading micro-organisms large, the leucocytes cannot cope with them, and disastrous effects result.

The lecture closes with a happy comparison of the process to a battle. Briefly, it is as follows. The leucocytes are the defending army, the blood-vessels are the roads and lines of communication. Every composite organism has a standing army of leucocytes. When the body is invaded by bacilli, bacteria, or chemical irritants, information of the aggression is telegraphed by the vaso-motor nerves, and leucocytes rush to the attack: reinforcements and recruits are quickly formed to increase the standing army twenty or thirty times the normal standard. Cells die and are eaten by their companions: the slaughter is so great that the tissues are burdened by the dead bodies of the soldiers in the form of pus. In the cells bacilli in the various stages of destruction are seen. These dead cells, like the corpses of soldiers who fall in battle, later become hurtful to the organism, for they serve as breeding-grounds wherein the bacteria may germinate, and, like a pestilence and scourge, devastate the individual.

Lecture III. was on "The Etiology of Neoplasms." At the outset Mr. Sutton begs to have a discrimination made between tumors and the "curious medley" with which they are confounded. He defines a neoplasm as "a new growth characterized

by histological diversity from the matrix in which it grows: it is distinguished from inflammatory new formations by the variety of its forms, mode of origin, and the frequent inherent tendency it has to increase." He notes that it may more or less resemble the matrix-tissue, but certain features may always be detected that show their heteroplastic nature. Hyperplasia of organs and infective granulomata are not included in the above definition. At once the speaker makes that classification of tumors which is the most scientific,—an embryological one,—and then proceeds to substantiate the arguments of Cohnheim, using them in a more extended sense.

The grouping Mr. Sutton makes is as follows: (1) the mesoblastic group, including the connective-tissue growths; (2) the epiblast and hypoblast group, comprising adenomata, carcinomata, and papillomata; and (3) the teratomata, neoplasms containing tissues derived from the three embryonic layers. The truth of Cohnheim's theory depends upon the existence of persistent rudiments,—"germinal rudiments" Sutton calls them,—and in answer to the questions, Do they exist? and do we have any evidence to show they become tumors?—many facts are brought forth by the lecturer. He answers the last question first. If we acknowledge, as we do, that true cysts may develop from functionless ducts or "cyst-germs" (*e.g.*, cystic dilatation of the tubules comprising the parovarium), then the origin of solid neoplasms from rudiments should not be doubted. The existence of germinal rudiments (first question) is proved by the fact that islands of cartilage are found in the skeleton of the vertebrates in bony situations, which are almost always the seat of enchondromata. They may be demonstrated, often readily, in children and sickly animals. Further, moles and nævi are tumor-germs; a small nævus becomes an angioma frequently.

Admitting, after the study in mammals, the undoubted presence of the rudiments, Mr. Sutton states the course these rudiments may take. Three courses are open to them: (1) they may, later in life, undergo transformation into normal tissue; (2) they may remain quiescent throughout a long life; (3) irritation may stimulate them to abnormal activity. What is constituted by this irritation is not stated. If the origin of enchondromata, osteomata, and angiomata from rudiments were admitted, it should be proper to make the application to other tumors. The anatomical location of the neoplasms is one of the most important points of the lecturer's argument,—that they are confined to regions of the body where the elements of which they are composed can be demonstrated.

The sarcomata are then briefly considered, and the lecturer is led to believe, from large study and also by the conclusions of Mr. Gould, that the round-celled sarcomata are the result of the irritation of micro-organisms or of a previous injury. He observed that sarcomata are found with greater frequency in those parts of animals exposed to injury, and that the inflammatory tissue exceeds normal limits, develops erratically, and plays the part of a tumor-germ. Apparently this is confirmatory of some recent observations of Formad, of Philadelphia, and Hall, of New York.

Mr. Sutton then discusses the second group of tumors, which, in their structure, in the relations of their cells to the blood-vessels, or rather to the lymphatics, and in their mode of development, resemble glands. A hyperplasia of the gland and a glandular neoplasm are distinguished by the absence of true gland-secretion in the latter. Moreover, gland-cells are separated from the blood-vessels by lymphatic spaces, while cancers are bloodless, but well supplied with lymphatics.

He then shows the analogy between the development of neoplasms and glands. The latter begin by a down-growth of the epithelium from the hypoblast or epiblast into the mesoblastic tissues. In a section of a fœtal thumb at the fourth month, the several glands appear as flask-shaped diverticula. Later in life, irritation, local or otherwise, affecting the tissue may cause abnormal epithelial growths, which, rising above the general level, may produce a wart. On the other hand, the epithelial growths may dip into the sub-epithelial tissues, and on account of lack of formative development, either from decline of vigor or general constitutional debility, the new tissue never develops functionally, runs riot, and originates tissues of low vitality,—carcinomata. The conditions favorable to the development of carcinoma—debility, etc.—are absent in the young: hence in the young we have warts, in the

old, cancers. Cancers are rarely met with in animals other than man.

The third group of tumors are philosophically discussed, and data are presented of great interest. These tumors, as is well known, are congenital, and are remarkable for the variety of elements composing them. They are especially liable to occur in those situations where the three blastodermic layers are brought into direct continuity temporarily with each other during fœtal life. These situations are indicated in embryo by a temporary "passage," and it is interesting to know that they (the situations) correspond with the position of the teratoma, or at least to cysts and tumors with mixed elements, in mature life.

He considers teratomata, therefore, not as curiosities; he "regards them as arising from pre-existing tubules or ducts, which in the normal development should become obliterated, but they may in fœtal life dilate and become mixed with various other tissues in their immediate neighborhood, and, as they lie on the borderland of mesoblastic, epiblastic, and hypoblastic elements, they become incorporated with them, and form in many instances amorphous masses, and constitute one of the most powerful witnesses to Cohnheim's theory of 'tumor-germs.'" The relation of teratoid tumors to obsolete canals is illustrated in the tongue. The "lingual duct," the lecturer says, is the favorite seat of dermoid cysts about the tongue, and it is the remains or the seat of a large embryonic passage.

The lecturer then shows the resemblance in structure and mode of development between the thyroid gland and congenital coccygeal tumors (anterior). Congenital cervical cysts are treated of, and it is believed that they are repetitions of the so-called cervical sacs of monkeys.

The lecturer then concludes as follows: "It seems impossible to escape from the conviction that any one ambitious of becoming a scientific pathologist must first be a sound human anatomist; he must also acquire a tolerable knowledge of comparative anatomy and keep well abreast of the teachings in embryology. Having acquired a competent knowledge in these subjects, he will then, in spite of himself, become a firm believer in the fundamental principles of the grand doctrine of evolution."

SUICIDE IN ENGLAND AND FRANCE.

BY JOHN G. LEE, M.D.

ABOUT six months ago, Dr. William Ogle, the efficient Deputy Registrar of Vital Statistics for Great Britain, read a most interesting paper on "Suicides in England and Wales, in Relation to Age, Sex, Season, and Occupation,"* before the London Statistical Society. Recently, and quite opportunely, the French government has published figures of equal importance for 1884.† The alarming frequency of self-murder within the past few years, and the attention now devoted to the study of its phenomena by alienists, jurists, and moralists, would seem to render a comparison between these two countries of value.

Dr. Ogle, in his observations, which cover a period of twenty-six years (from 1858 to 1883, inclusive), records a total of 42,630 deaths by suicide,—a mean death-rate from this cause alone of 72 persons annually per million living inhabitants. The actual and proportional figures below the age of 15 years are insignificant, but from that age up to 65 suicides increase rapidly, reaching a maximum rate of 251 per million persons living between 55 to 65 years of age.

Massing all ages together, the voluntary deaths of males exceed those of females in the proportion of 267 to 100; the females outnumbering the males only between the ages of 15 to 20 years: the average rate by sex being 104 for men and 41 for women per million.

In the suicide-rate according to occupation, soldiers head the list in the enormous proportion of 1149 per million; and in general the death-rate was highest in such sedentary occupations as are carried on by the educated portion of the community, while for occupations involving rough manual labor, with exposure to the elements, it was low. Clergymen, for instance, show a suicide-rate of 139 per million, while among shipwrights and miners it was 96 and 74 respectively.

These English statistics show self-murder to vary very definitely with the seasons, forming a regular annual curve, in which the minimum was in December and the maximum in June.

* Vide London Lancet, February 20, 1886, pp. 357, 358.

† Rapport général du Ministre de la Justice sur l'Administration de la Justice criminelle en France et en Algérie, pour 1884.

Death by hanging was the favorite method; then in order of frequency come drowning, cutting or stabbing, poison, and shooting. In the selection by self-murderers of the means by which they will terminate existence, occupation is a factor of some importance. Members of the military, clerical, and legal professions, together with gentlemen of leisure, show a marked preference for fire-arms. Physicians, chemists, druggists, and photographers usually make choice of some one of the many poisons used in their business. To the fairer portion of creation drowning seems preferable to hanging, and both knife and pistol are discarded in favor of poison. Careful and deliberate man, desiring to end his life, chooses a poison sure and painless in its action. Emotional woman, ending her days in hysterical or hypochondriacal passion, takes with indifference any toxic which may be at hand. Another curious fact to which the British statistician directs attention is that "the idea of death in cold water appears repulsive in winter seasons, and that method of self-destruction is avoided."* For, if the year be divided into periods of six months each,—one from October to March, the other from April to September,—out of 1000 suicides committed in each period, there were in London, on an average of twenty years, 205 suicides by drowning in the warmer and only 177 in the colder period. So that even when about to seek death persons are not indifferent to considerations of comfort or discomfort.

It would also seem that the probabilities of self-murder are greater than most of us imagine; for, by his calculations, Dr. Ogle advances the startling theory that, out of every 119 young men who attain the age of 20 years, one will perish by his own hand.

Across the Channel, the voluntary deaths registered since 1851 down to 1884 amounted to the enormous number of 57,620, beginning with 3639 for the quinquennial period 1851–1855, and ending with 7572 in 1884; the actual and proportional figures having doubled since 1855, when the rate was 10 per 100,000 population living, to 20 in 1884.

As might be expected, the Department of the Seine (Paris) alone furnishes 1420 cases, or more than one-sixth of the whole number. Indeed, French statisticians have observed that the number of suicides in the provinces is in inverse ratio to the distance from the capital. To every 100,000 population living in towns of more than 2000 souls the suicide-rate is 27, while in the rural districts and smaller towns, where the population is more widely scattered, the ratio is but 16 per 100,000 inhabitants. Here it may also be remarked that recent returns made by the Registrar-General of England† show that the death-rate from self-slaughter "is governed to a large extent by the proportion of the urban element in the population." In the ten years 1871–1880 it was highest,—85 per million in Middlesex, and 81 per million in the counties of Surrey, Kent, and Sussex, which contain a large proportion of the metropolitan population.

Of the 7572 self-murders dealt with in the French report, 5964, or 79 per cent., were males, while only 21 per cent., or 1608, were females,—these figures establishing a ratio of 32 male suicides to only 8 by females to every 100,000 persons of the same sex,—proportions far greater than those given for England by Dr. Ogle.

Suicides in France appear to increase in lines parallel with age, the maximum being reached in the sixtieth year. In 169 instances the ages were not ascertained; in the remaining 7403 the ages were as follows:

Under 16 years,	67, or	1	per cent.
16 to 21 "	331, "	5	"
21 " 25 "	391, "	5	"
25 " 30 "	465, "	6	"
30 " 40 "	992, "	14	"
40 " 50 "	1394, "	19	"
50 " 60 "	1508, "	20	"
Over 60 "	2255, "	30	"

The judicial inquisition held in every case of suicide in France could not establish the civil status of 324 of those who sought refuge from the ills of life in self-slaughter, but of the others 2623 (36 per cent.) were bachelors, 3365 (47 per cent.) were married, and 1260 (17 per cent.) were widowers or widows. Three-fifths of these latter had children, and for those recorded as married the proportion is higher (63 per cent.).

Considered in connection with their

* A fact already commented upon by the writer in a paper read before the American Medical Association, St. Paul, Minnesota, June, 1882.

† London Lancet, March 20, 1886, pp. 558, 559.

occupations, the 7572 suicides are divided into six classes, the figures of which vary considerably from those noted in England:

Agricultural occupations	2376,	—23 per cent.
Laborers and mechanics	2109,	—28 "
Merchants (employers and clerks)	922,	—12 "
Property-owners, capitalists, and professional men	993,	—13 "
Personal servants	476,	— 6 "
Occupations not specified	696,	— 9 "

Neither does the suicide-rate in the French military service tally with that observed in England, being but 0.35 to every 1000 or 35 to every 100,000 men present with the colors.*

Months and seasons, however, do not present such marked differences, either with Dr. Ogle's observations or those of preceding years in France:

January,	629	1847, or 24 per cent.
February,	507	
March,	711	
April,	655	2201, or 29 per cent.
May,	781	
June,	765	
July,	790	2004, or 27 per cent.
August,	612	
September,	602	
October,	559	1520, or 20 per cent.
November,	506	
December,	455	

As in England, hanging is the popular method of self-destruction, 3303 (44 per cent.) persons having ended their lives at the end of a rope. Then follow—

Drowning, 2069,—27 per cent.

Shooting, 906,—12 per cent.

Asphyxia with charcoal-gas, 616,—8 per cent.

Jumping from heights, 219,—3 per cent.

Cutting or stabbing, 194,—2 per cent.

Poison, 146,—2 per cent.

Means not specified, 119,—2 per cent.

The causes which led these unfortunates to sacrifice themselves have likewise been made the subject of exhaustive inquiry by the proper authorities. Though the causes were not determined in 567 suicides, 2168 (31 per cent.) are set down to weakening of the mental faculties; 1785 (25 per cent.) are credited to illness and physical suffering; 1133 (16 per cent.) are placed to the account of dissipation and misconduct; family troubles are held responsible for 1031 (15 per cent.); and financial embarrassment and poverty for 888 (13 per cent.). It is also interesting to note that among the above-quoted grand groups 809 (11 per cent.) were set down as being due directly to alcoholism, while 229 cases were those of criminals.

These figures require no extended comment: they speak for themselves.

333 South Twelfth Street.

* Étude statistique sur la Morbilité et la Mortalité dans l'Armée française (1875–1879), par le Dr. A. Marvand. Ann. d'Hygiène, tome x., 1883, p. 539.

REMARKS ON LANOLIN.

Read before the College of Physicians of Philadelphia, April 7, 1886,

BY THOMAS G. MORTON, M.D.

ALTHOUGH the members may be familiar with the new substance, lanolin, introduced by Liebreich, I thought it might be interesting to exhibit a few specimens of this preparation from the wool of sheep. Those who have used it have been much pleased with its employment in the preparation of ointments for external application. It can readily be rubbed into the skin, and produces no irritation, and therefore would probably be valuable in massage. It is probable that substances combined with lanolin will be more readily absorbed than if prepared with other bases. One of the remarkable properties of lanolin is that it can be readily combined with water. I show you a specimen containing sixty per cent. of water.

I quote the following from the *American Journal of Pharmacy* for February, 1886:

"Under the name of lanolin, Professor Liebreich introduced the fat obtained from sheep-wool. One of its properties is to take up more than its own weight of water. Unna states that cooling ointments should contain large quantities of water. Dieterich, with a view to determine the quantity of water taken up by different salve-bases, experimented with twenty-one different bases at a temperature of 15° C., taking for each experiment 100 parts of the base. His results were as follows. Cosmoline took up 4 parts of water; lard, 15; benzoinated lard, 17; and lanolin, 105.

"Lanolin, as it now appears in the market, is a perfectly neutral base, and

hence is not apt to decompose any medicament which might be added. Lasser experimented with it on four hundred patients, and states that lanolin is readily absorbed by the skin, does not produce any irritation, and permeates the lower layers. Bachmann rubbed a ten-per-cent. iodide of potassium ointment, made with lanolin, into the skin for five minutes. After the lapse of half- or three-quarters of an hour, iodine was detected in the urine. The elimination of the iodine by the urine continued for fourteen days after several applications of the ointment. Lanolin was used by the ancients, and is mentioned by Ovid, Herodotus, Pliny, and Aristophanes."

I have received the following from Mr. McKelway, the druggist, who made the preparations shown to-night:

"All the published articles I have seen are very chary of any description of the detail of its manufacture. Liebreich patented his process in the United States in January, 1883, and the process patented by him is concisely stated as follows:

"He takes the suds from the washing of wool in the mills, submits it to the action of a centrifugal machine which separates the soapy, oily suds from the dirt associated therewith, decomposes the suds by an acid, whereby the acid and the saponifying alkali unite, and the saponified wool-fat is separated, combined with about one hundred per cent. of water; this is then thoroughly washed with cold water, then heated so as to separate the water and the wool-fat, and again combined with a definite proportion of water, and lanolin is the result.

"Or, he treats wool with alkaline water, producing his suds in that way, and then proceeding as I have already outlined.

"A much quicker and less complex way of making the article is to treat the wool directly with petroleum benzine; distil off the benzine, and the wool-fat remains; combine this with a proper proportion of water, and lanolin results. In his patent specifications Liebreich speaks of this process, but says it is objectionable because of the difficulty of getting rid of the benzine odor. In the exceedingly short time I have had to prepare what I have prepared, this shorter process was the only one that I could use, and the samples I present were so made.

"William M. Coates, Esq., the wool-merchant, tells me that merino wool, clipped without the sheep being washed, contains the enormous proportion of sixty per cent. of this fat. I enclose samples of the wool. If you will twist very tightly together a number of filaments of it, you will be able to collect the oil on your finger-nail. I also enclose some of the same fleece from which most, if not all, of the oil has been extracted with benzine.

"I send, also, a sample of the oil, labelled 'wool-fat;' and also a jar of lanolin, made by me by mixing this same wool-fat, 100 parts, with water, 30 parts (it is so labelled); and also a sample of lanolin imported for me by Messrs. Lehn & Fink, of New York.

"The cost-price of the imported lanolin is now, in large quantities, $1.00 per pound; a very little while ago it was $2.00 per pound. I believe it will ultimately be about as cheap as lard.

"When it is considered that all wool averages about forty-five per cent. of its weight of this fat, that it has all to be removed before the wool can be manufactured into fabrics, that up to this time it has had no value, that the process for its extraction is not a very expensive one, and that lanolin is thirty per cent. water, I think you will be convinced that lanolin will certainly be as cheap as lard as soon as competition in methods of extraction and in supplying have an opportunity to affect its price.

"Billions of pounds of this wool-fat have hitherto been thrown away every year.

"If lanolin is what it is claimed to be therapeutically, a new and immense industry opens to the world."

The *Therapeutic Gazette* of March 15, 1886, speaks as follows of the practical uses of lanolin:

"From his investigations of the composition of the cholesterine fats found in keratinous tissue, Dr. Oscar Liebreich (*British Medical Journal*, February 13, 1886) conjectures that the absorption into the skin would be best in the case of those fats which have their origin in the keratin-bearing substances, as hair, epidermis, etc. The old theory, that the skin was only oiled from glandular secretion, did not harmonize with these researches; and lanolin, upon his suggestion, is now being tested as to its efficacy in therapeutics as a new basis for salves and ointments. It is of impor-

tance to add other ingredients to make it more pliant, as it is too sticky a mass in itself to be employed alone; and from many trials which Dr. Liebreich has made with different substances—as vaseline, paraffine ointment, glycerin, oils, and fat—for this purpose he has found the latter by far the best, as the others generally interfere with the absorbing qualities of lanolin. On exposure, the upper surface of lanolin, and of all lanolin salves and ointments, becomes darkened, due to the evaporation of water, and not to its decomposition."

Speaking with Dr. Leidy with reference to lanolin, he said that the skin of the sheep has an enormous number of sebaceous glands, and that he was not surprised at the amount of fat taken from the wool. The usual way of making mercurial ointment—by rubbing up the mercury with mutton suet—is a rather troublesome and tedious proceeding. If lanolin be used, it can be made as perfectly in thirty or forty minutes as by the longer process. It is said that the 0.001 per cent. of bichloride of mercury with lanolin rubbed upon the skin can be tasted in the mouth in thirty minutes.

[After the reading of the preceding paper, Dr. Keen remarked, "I have used lanolin in several instances during the last week or ten days. One case was that of a child, eight years of age, with an enlarged gland under the jaw, the size of an English walnut. I prescribed iodine, two grains to the drachm of lanolin. I saw the child a week ago, and the gland had almost entirely disappeared. This was a more rapid disappearance than I have ever seen from other iodine applications. This is the only case in which I have had any results, although I have used it in a number of instances and like it very well."]

A CASE OF ENCAPSULATED PELVO-PERITONITIS, DUE TO TUBERCULAR ULCERATION IN DOUGLAS'S CUL-DE-SAC, WITH PERFORATION INTO THE ILEUM, VAGINA, AND RECTUM.

Read before the Clinical Society of Maryland, March 19, 1886,

BY W. J. JONES, M.D.,
Resident Physician to Bay View Asylum.

E. Y., colored, aged 22 years, came into the hospital department of Bay View Asylum on January 20, 1886, with the following history. She had led the life of a prostitute, and was addicted to all sorts of dissipation. Four months before her entry into the hospital a cough had developed, with loss of flesh, fever, and night-sweats, though the latter had not been constant. One year prior to her sickness she gave birth to a child, which only lived a short time, and since that she had been very irregular in her menses until the last six months, when they had ceased altogether. There was a profuse purulent discharge from the vagina, which commenced a short while before her entry into the hospital, and she had suffered a good deal of pain in the lower part of her abdomen. There was slight cough. Examination of the lungs revealed a slight broncho-vesicular respiration at the apices. Heart-sounds normal. Palpation of the abdomen gave no evidence of any internal enlargements. No history or evidences of syphilis.

On January 22, patient was examined per vaginam. The urethra, when pressed upon, yielded no discharge; meatus normal. A profuse, purulent, fetid discharge exuded from the vagina, the mucous membrane of which was pale. The cervix was elongated, conical, indurated, and drawn considerably to the left side. Nothing was found in the uterus to account for the discharge, nor could any openings into the vagina be made out. The uterus was bound down and very slightly movable. Considerable induration was felt to the left of the cervix. The urine was examined, and found free from albumen and casts. The diagnosis of pelvic abscess was made. Tonics, stimulants, and nutritious diet were freely administered; but they failed to be of any benefit.

When examined on February 1, emaciation was more profound, hectic and night-sweats constant, and the purulent discharge from the vagina still continued. Vaginal injections were given twice daily.

On February 14 a profuse diarrhœa began. The stools were purulent and very fetid. Much pain was felt in the lower part of the abdomen, for which two-grain opium suppositories were given every four hours. All conditions increased in severity, and the patient died on the 8th of March, apparently from exhaustion.

The autopsy, made by Dr. Councilman, revealed the following. Body small, slightly built, and much emaciated. Miliary tubercles and areas of caseation were found scattered through both lungs, the caseation more pronounced in the apices. On both pleuræ scattered miliary tubercles. Bile-duct tuberculosis of the liver. Spleen enlarged, and contained numerous large tubercles. On examination of the intestines, the omentum and three loops of the ileum were found to be tightly adherent in the pelvis. The cavity of the pelvis was entirely shut off from the general peritoneal cavity by these adhesions. The general peritoneum contained a few tubercles, but no adhesions or evidences of inflammation. The adherent omentum and ileum were tied and removed, together with the pelvic

viscera. On examination, there was an abscess-cavity the size of an orange, filled with stinking pus, in Douglas's cul-de-sac. The pus contained numerous shreds of necrotic tissue, and the walls were sloughing. A large slough was found adherent in the cavity, which was recognized as the attached omentum. The cavity was enclosed by the adherent intestine and omentum and the ligaments. There was an opening from the abscess-cavity into the rectum which would admit a small pencil, and a smaller opening into the vagina at the apex of the posterior cul-de-sac. The uterus was enlarged, the mucous membrane thickened. Both tubes very much enlarged, and filled with a caseous, necrotic tissue. A small opening was found from the abscess into the ileum. In the ileum, below this opening, were numerous ulcers, easily recognized as tubercular in character. In the right vulvo-vaginal gland was a small abscess. There was no involvement of the recto-vaginal connective tissue.

This case presents several points of interest. Next to inflammation around the vagina and uterus not involving the peritoneum, the most frequent form is the inflammation of the pelvic peritoneum. If we could judge from post-mortem examinations alone, this latter would seem much more common than the former, as it always leaves evidences of its having existed in the fibrous adhesions so often found here on autopsies. These adhesions, though often a source of danger from constriction, sometimes play a most conservative part in enclosing an exudation and shutting it off from the general peritoneal cavity. The exudation may be thin and watery in character, and have all the appearances of a cyst. The present case is somewhat similar to the one reported by the writer in the *American Journal of Obstetrics* for March, 1886. It is probable that in this case also the starting-point of the disease was a circumscribed tuberculosis of Douglas's cul-de-sac. It is possible, however, that it began from injury at the last puerperal period, and afterwards became tuberculous. That it was tuberculous is shown from the infection of other parts which evidently took place from it, as the ulcers in the ileum and the tubal tuberculosis. It is probable that the abscess did not take on its special fetid, necrotic character until the perforation into the rectum occurred.

Dr. Oliver Wendell Holmes will take the degree of Doctor of Laws at Cambridge on the 17th instant.

TRANSLATIONS.

The Bark and Active Principles of Quebracho Blanco. — MM. Eloy and Huchard, in an article on "The Bark and Active Principles of Quebracho Blanco," published in the *Archives de Physiologie et Pathologie* for April 1, 1886, arrive at the following conclusions. The bark of Quebracho blanco furnishes four active substances differing from one another in symbols, physiological and toxic properties. The active principles of quebracho modify only slightly general sensibility of mammalia (guinea-pigs, rabbits, dogs). Quebrachine, hypoquebrachine, aspidospermine, pure, do not influence general sensibility, but the residuary products do, apparently. The phrenic nerve was more susceptible to galvanic stimulation after aspidospermine had been administered than after quebrachine. Motility is affected in various ways. In strong doses, aspidospermine causes convulsions; in small doses, fits of trembling; in massive doses, rapid paralysis. The most remarkable phenomena observed in the animals experimented on are hoarseness and aphonia, especially in guinea-pigs; it may be attributed to paralysis of the extensor muscles of the vocal cords. Quebrachine causes muscular paralysis more rapidly and more evidently. Hypoquebrachine and aspidospermatine are analogous in action to quebrachine, but less evidently so than aspidospermine. The residuary products provoke thorough and rapid paralysis. Four or five minutes after a hypodermic injection, paralysis attacks the extremities of the limbs, rapidly gains them entirely, and alternates with tonic convulsions. The circulation is not modified either by residuary products or by hypoquebrachine or quebrachine; but the heart-beats are slowed under the influence of aspidospermine, and quickened after injections of aspidospermatine.

MM. Eloy and Huchard consider that it is practically important to repeat previous researches concerning the action of quebracho upon respiration, inasmuch as its bark is recommended for different kinds of dyspnœa. Quebrachine does not alter either the rhythm or the depth of the respiratory movements; neither do the residuary products of aspidospermatine. Hypoquebrachine slightly modifies them. Aspidospermine, on the contrary, increases

the amplitude of respiratory movements in the proportion of one to five in eight or fifteen minutes. A moment afterwards the rhythm is increased, and continues so during two, three, and even four hours: it is not transitory, like the increase in amplitude. If the dose is increased or not eliminated, arhythm occurs, and the depth or amplitude of the movements is lessened. Aspidospermine has a greater influence on the frequency of costal respiration than on abdominal. It is, therefore, of all the active principles of quebracho, the greatest modifier of the respiratory movements.

All the active principles of quebracho modify the temperature. The residuary products raise it; but this increase of temperature seems to be due to asphyxiation. The aspidospermine which is currently sold lowers the temperature from two to three degrees in a space of from thirty to forty minutes; aspidospermatine, from three to six degrees in nineteen minutes; hypoquebrachine, the same. Of all these substances, quebrachine is the most antithermic. Venous blood is black when the animal is asphyxiated by the influence of residuary products; reddish or red under the influence of quebrachine, hypoquebrachine, aspidospermatine, and aspidospermine: that is to say, the substances that lower the temperature. This coloration is comparable to that observed in animals which die whilst the interchange of gases is arrested. These substances cause hypersecretion of the kidneys, and of the intestinal and salivary glands. Hypoquebrachine and aspidospermine produce diarrhœa and diuresis; quebrachine increases diuresis; aspidospermine increases salivary secretion in guinea-pigs and rabbits. The residuary products have the same action on the intestinal glands and the kidneys. All these substances can cause death. The residuary products are the most toxic; next in order are quebrachine, aspidospermatine, and, lastly, aspidospermine. Death results either from asphyxia or from paralysis of the muscles of respiration when the doses are considerable; when the dose is smaller and elimination only partial, death ensues more slowly, and is due to arrested interchange of gases. By administering suitable doses of these principles, the residuary substances excepted, useful therapeutic effects may be obtained. It must be remembered that quebracho is not an inert substance. If it does not realize all that enthusiasts assert in its favor, it nevertheless has certain merits.

These researches were undertaken by MM. Eloy and Huchard to verify what had been said by previous investigators; also to study the properties of each active principle of the bark. The same investigators are engaged in further researches on quebracho, which will shortly be published.

An Apparatus for Measuring the Auditory Acuteness.—M. D'Arsomal's apparatus for measuring auditory acuteness differs from other similar instruments in two particulars: it is much simpler, and indicates directly the proportional intensity of sound. It is composed of a sound-producer consisting of a small tuning-fork giving the normal "*la*" (eight hundred and seventy vibrations), kept at work by an electro-magnet placed according to the disposition adopted by M. Mercadier. A single Leclanché element is sufficient to keep it in motion. A telephone is placed in communication with the two ends of the thread forming the coil of the electro-magnet. The telephone is thus traversed by the extra *courant de rupture* (interrupted current) at each vibration of the tuning-fork. The tension of this extra current is much greater than that of the battery, and causes the telephone to vibrate intensely in unison with the tuning-fork. In order to lessen the intensity of the sound in the telephone, it is necessary to pass a current along a glass tube full of water. By plunging a metallic stem into the water, the length of the column of water traversed by the current is increased until the intensity of the sound is reduced to its minimum and is scarcely perceptible. The strength of the extra current, and consequently the intensity of the sound, are in inverse proportion to the length of the column of water of the graduator which lessens the sound. The length of the water-column gives the degree of the auditory sense tested.

The Lehigh Valley Medical Association will hold its Sixth Annual Meeting at Glen Summit on Wednesday, June 16. The annual address will be on "The Frequent Dependence of Diseases of the Ear upon Catarrhal Disease of the Nose," by Charles H. Burnett, M.D., of Philadelphia.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JUNE 12, 1886.

EDITORIAL.

THE STATE SOCIETY.

THE session of the State Society at Williamsport was fairly well attended, the programme interesting, the proceedings admirably directed by an experienced and impartial presiding officer, and an attentive and efficient Committee on Arrangements did all in its power to make the meeting a success; and in these features the thirty-seventh annual convention may be said to have been satisfactory when compared with previous meetings of the Society. And yet it must be admitted that in several points it was open to criticism. In the first place, what was intended to be one of the features of the meeting—the reports from the various County Societies—has almost disappeared from the proceedings; it was introduced in the midst of the rush of routine business during the first morning session. We would urge the proper officers to correspond with the various County Medical Societies and request them to make it a part of the duty of their President and Secretary to make out an annual report and send it to the Secretary of the State Society one month in advance of the meeting. Abstracts of these reports should then be prepared, and an entire morning or afternoon or evening session devoted to their reception and discussion. Reports from the Censors of the thirteen districts should also be presented and read. We earnestly hope that at the next meeting this will be suitably provided for by the Committee on Arrangements.

As regards the length of the meeting, three full days are not too much to be given to the consideration of the subjects presented. The fact that the work of the recent session was practically condensed into two days was very unfortunate, and even unfair, to the readers of papers, since there was evidently no calculation made for time to be devoted to discussion; and the discussions which did occur so encroached upon the time that several papers especially prepared for the session had to be read only by title. We would take the liberty of recommending that a Committee be appointed on Scientific Work, who should arrange this portion of the programme,—all papers proposed to be read to be submitted to this Committee for its approval or rejection a month before the meeting. Such a Committee has recently been formed in the Philadelphia College of Physicians and in the American Surgical Association, and has been for some time in operation in the Royal Medical and Chirurgical Society of London. With such a censorship over the proceedings, more time would be secured for the discussion of questions of importance, and a better opportunity afforded for a well-digested and authoritative expression of opinion upon disputed points. The Committee on Programme might select some papers that are to be read in full, and appropriate a certain time for their discussion; others might be read in abstract or by title, and have no additional time specially devoted to their consideration except by vote of the Society.

Efforts should be especially directed towards having the different parts of the State represented by papers as far as possible, in order that no single county or district shall apparently monopolize the programme. A little correspondence before the meeting would easily prevent such an occurrence. As an instance of the undue haste manifested in the proceedings, the Nominating Committee, in its report, violated the By-Laws in naming as delegates to the American Medical Association several who were ineligible because not present at the meeting, and one person, at least, who is not a member of the State Society. The fact

that the report was accepted without examination shows that the Society was as derelict as the Committee,—although the Society, on the last day, did the best it could to rectify the mistake by authorizing its President and Secretary to fill the vacancies.

While appreciating the compliment of the reception and banquet tendered by the Lycoming County Society at the Park Hotel, which in itself was most pleasant and agreeable, we believe that the Society should in future adhere to the Standing Resolution (Transactions for 1870, page 23) and have an annual subscription dinner. We hope that at the meeting at Bedford the different portions of the State will be more fairly represented both on the floor and in the programme, that the County Societies and Censors will be assured of a proper hearing for their reports, that sufficient time will be allowed for discussion of important subjects, that an annual dinner will be held, and that the entertainments will not be allowed to encroach upon the serious business of the Society.

HYDROPHOBIA.

THE papers on hydrophobia read before the State Society had for their motive a laudable desire to allay the popular scare on this subject which had been excited by the almost daily sensational accounts published in the newspapers. At the same time they each gave evidence of a strong bias, which greatly detracted from their influence and revealed more of a controversial than of a judicial spirit. To show the impression that they made, we may be pardoned for quoting the newspaper report of the meeting, which says that the lecturer "as good as said that Pasteur was a fraud." Of course Dr. Dulles did not say any such thing, nor is it possible that he could even entertain the thought that Pasteur is not as honest as he is earnest in his investigations. It merely shows how cautious and judicial should be our tone in considering vexed questions before a mixed audience in a public place and where our utterance has a quasi-official character.

With reference to the value of Pasteur's researches, it is evident that he is manfully and scientifically working out a problem which he confesses is as yet unsolved, although every day approaching nearer a solution. Many able observers declare themselves satisfied with the evidence already adduced. Vulpian declared to the Academy that "Pasteur has created a method of treatment by means of which one may with absolute certainty prevent the development of rabies in a man who has been bitten by a mad dog. I say 'with absolute certainty,' because, after what I have observed in M. Pasteur's laboratory, I cannot doubt." That by Pasteur's method of inoculation dogs are rendered insusceptible to the effects of inoculation with rabic virus we believe is now generally accepted as a demonstrated fact. Nearly a thousand human beings supposed to have been bitten by mad dogs have now been treated by essentially the same method. Of the greater part of these it can only be said that the inoculations have been made too recently to determine whether they will escape entirely or not, on account of the varying length of the period of incubation in hydrophobia; but it is stated that out of nine hundred and sixty-five inoculations, there has been (excluding the Russians bitten by wolves) but one fatal case. Is this a coincidence? "Six hundred and eighty-two thousand five hundred francs have already been contributed towards the establishment of an institution for the inoculation of persons bitten by rabid animals. Is all the world gone mad, that money is lavished upon a chimera? It is as unscientific to deny upon insufficient evidence as it is to assert without proof. 'Tell American sceptics to wait,' says Pasteur.

'Doubt is wise and healthful; but doubters must not expect all their doubts answered at once. Recall Jenner. Could he have satisfied his opponents while he stood on the threshold of his experience? Let your last word to them be *wait!* and if they continue to doubt, let them come to me and judge for themselves.'" *

The Association of American Physicians will hold a preliminary meeting for organization June 17, in the Army Medical Museum building, Washington, D.C. The Constitution which will be submitted at this meeting provides that an annual session shall be held in the month of June, in the city of Washington, D.C. It provides that the proceedings shall consist of (1) discussions on subjects of general interest in the departments of medicine and pathology. These shall have been provided for by the appointment at the previous meeting of certain members, two upon each subject, to be called Referee and Co-Referee, to open the debate on the subjects selected for discussion. (2) Original communications. (3) Demonstrations of gross and microscopic preparations, of apparatus and instruments. The active membership is limited to one hundred. "Physicians of sufficient eminence to merit the distinction may to a number not exceeding twenty-five be elected honorary members." The programme of the meeting, which is to continue for two days, contains a number of presumably interesting and valuable papers, among the authors of which we find the names of S. Weir Mitchell, William Osler, James Tyson, E. T. Bruen, and Morris J. Lewis, of Philadelphia; Francis Delafield, W. H. Draper, William M. Polk, of New York; Reginald H. Fitz, of Boston; W. H. Welch and W. T. Councilman, of Baltimore; J. T. Whittaker, of Cincinnati; F. Peyre Porcher, of Charleston, South Carolina; and H. N. Lyman, of Chicago. A report of the meeting will appear in the next issue of the Times.

London Correspondence.—With our present issue we resume the publication of a monthly London letter. The name subscribed to the communication will be sufficient assurance to our readers that the correspondence will fairly represent current medical thought in the world's metropolis.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE Easter holidays seem to have every year more and more honor paid to them. The medical schools have long taken a vacation then, but nowadays even the societies show a tendency to avoid the week before and the week after Easter. Parliament adjourns, and the very numerous and influential class whose movements are governed either from choice or necessity by the parliamentary session are scattered about the country, resting and speechifying: consequently the world of London was very quiet during the last fortnight of April. During the fortnight which has just passed, however, everybody has swarmed back to London, the medical schools have begun the work of the summer session, and the medical societies are in full swing. Most of these societies are very much troubled by a plethora, I will not say of material, but of papers. At the Royal Medical and Chirurgical Society there is a Committee of Reference which inspects all papers before they can be put down to be read at a meeting, but at the other societies there is no such check upon long-winded writers, who often inflict an immense mass of irrelevant details upon their audience: it is difficult to obtain redress. Occasionally, when a well-known bore is found to be in full swing, he finds himself suddenly inaudible owing to a general fit of coughing accompanied by shuffling feet. But this extreme protest is not often made; and more commonly when a meeting, instead of ending at ten, according to regulations, is prolonged till nearly eleven, members show their disapproval by walking away, so that the unfortunate readers of papers which have been put down for the end of the evening are apt to find their audience not only impatient, but

* From Dr. Osgood's Paris letter written to the *Boston Medical and Surgical Journal*, Nos. 21 and 22, which all who are interested in this question should read closely and attentively.

small. Nevertheless, the fact remains that a great deal of the best clinical and pathological work done by the younger men is taken to the societies, and eventually published in their Transactions; extensive publicity is, however, immediately obtained by means of the reports in the weekly medical journals.

At the last meeting of the Royal Medical and Chirurgical Society, Mr. Ballance and Dr. Walter Edmunds, who both belong by education to St. Thomas's Hospital, reported the results of some experiments on the ligature of large arteries in their continuity. Owing to the Vivisection Act, which puts great difficulties in the way of any experimenter who is compelled to make use of living animals, the experiments were performed abroad, in the laboratory of Professor Birch-Hirschfeld at Leipsic. They found that when the lumen of the vessel was completely or almost completely obliterated by the ligature, it was unnecessary to rupture the inner coats of the artery; if suppuration was prevented, a good catgut ligature held for one month, and a kangaroo-tendon for two. The contention of the authors, that it was not advisable for the surgeon to rupture the inner coats of an artery which he was called upon to tie in continuity, did not meet with general acceptance: both Mr. Savory and Mr. Holmes, two of our most fluent and telling surgical orators, argued against the conclusion, urging that, though it might not be always necessary, it was always advisable, to rupture the coats, and made light of the fear of secondary hemorrhage.

The Ophthalmological Society discussed the subject of exophthalmic goitre last week at great length, but no very novel circumstances came to light. The paper contributed by Dr. Samuel Wilks was decidedly the most interesting, but even he had little new to say: his very strong recommendation of belladonna is worthy of note, for he is not one much given to praise drugs of any kind. Dr. Samuel West and Dr. Hill Griffith, of Manchester, contributed statistical papers, and Dr. Hughlings Jackson had something to say on the general pathology of the disease; he seemed inclined to accept the theory that the primary lesion affected the restiform body, though I cannot suppose, as did some of his hearers, that he would propose to ask the surgeons to operate on that region in the hope of curing the disease.

Sir Henry Roscoe, the eminent Professor of Chemistry in Owen's College, Manchester, and one of the members of Parliament for that city, has persuaded the Local Government Board (which many years ago absorbed the Board of Health) to appoint a Commission to investigate M. Pasteur's method of preventing the development of rabies after a bite by a rabid dog. Sir Henry Roscoe is the Chairman of this Commission, and the other members are Professor Burdon Sanderson, Sir James Paget, Dr. Lauder Brunton, Dr. Richard Quain (of the Dictionary), and Mr. Fleming, Principal Veterinary Surgeon of the Army. The Commission appointed Mr. Victor Horsley, the Professor-Superintendent of the Brown Animal Sanatory Institution, to be Secretary. Sir Henry Roscoe, Dr. Brunton, and Professors Sanderson and Horsley spent their Easter holidays in Paris, where they were very courteously received by M. Pasteur and his assistants, who placed all the facts he has accumulated at their disposal. He also presented the Commission with two rabbits inoculated by trephining with the hydrophobic virus which he uses. The members of the Commission who went to Paris have returned, bringing with them these animals, who have since, I understand, developed the symptoms of general paralysis which are considered by M. Pasteur to be characteristic of rabies when inoculated into rabbits. Some inoculation experiments will be made with the spinal cords of these rabbits, and a thorough search will be made for the micro-organism described by M. Fol, of Geneva, as characteristic of rabies. Mr. Horsley is an energetic worker, and, though a young man, already an experienced experimenter, and there is therefore good reason to hope that the English Commission will throw some valuable light on this vexed question.

Rabies is said to be still very prevalent in England, and the new Commissioner of Metropolitan Police has issued a fresh muzzling order. Unfortunately, his authority does not extend beyond the metropolitan area, so that in the suburbs and home counties the regulations against rabid dogs are not systematically applied. We have had no cases of hydrophobia, however, since January: so that some good has been done.

A few years ago the Grocers' Company, which is one of the wealthiest of the City of London companies, devoted a large sum of money to the foundation of prizes and scholarships for the advancement of scientific research. A thousand pounds was expended annually by this Company in scholarships. Two of the scholars, Dr. L. C. Wooldridge and Mr. Alfred Lingard, delivered lectures at the University of London shortly before Easter on the subjects of their research. Dr. Wooldridge, who is Demonstrator of Physiology at Guy's Hospital, had to report some very remarkable results of his study of the mode of coagulation of the blood. By the use of very low temperatures he had isolated from the serum a body which, when injected into the circulating system of another animal, produced almost instantaneous general clotting. He exhibited a clot thus produced filling the aorta of a rabbit: the animal had died a few minutes after the injection of the coagulating material. The amount of this substance present in the blood in health is very much increased in septicæmia and is

diminished in starvation. Both these observations appear to have some pathological importance: the increased quantity present in septicæmia may be at least one of the causes which favor the extensive thrombosis observed in pyæmia. I use the word "septicæmia" in the sense which Dr. Wooldridge probably attaches to it, as signifying, that is to say, toxæmia produced by the presence of septic material in the blood, whether derived from without the body or from suppurating centres within. His observation that the quantity of this coagulating material in the blood is diminished by starvation and increased by a diet containing much fat may directly afford a practical clinical hint. If Dr. Wooldridge is right, then the treatment of aneurism by almost total withdrawal of food must be mistaken. The object of the treatment is to reduce the volume of the circulating blood; but if at the same time it diminishes the coagulating power of the blood, it must do more harm than good. On the contrary, if it should turn out that Dr. Wooldridge is right in supposing that fat has a greater power than any other kind of food in increasing the quantity of this coagulating substance in the blood, the fact may suggest some valuable reflections as to the best diet in old age when gangrene is threatened, or after pregnancy when thrombosis appears imminent.

Last month everybody was very much interested in and had formed his own opinion about the "Pimlico Mystery." The case presented one or two points of medico-legal interest. When stripped of the somewhat prurient details which gave it a special interest to a certain section of the public (it is a sad commentary on our boasted morality and civilization to have to say that the court was crowded with city matrons), the question which the jury had to decide was whether the death of a hypochondriacal grocer was due to chloroform, and, if so, by whom the drug was administered. The expert evidence left no doubt that death was due to a large dose of chloroform swallowed shortly before, and the facts of the case showed that the fatal dose must either have been taken by the deceased himself or administered to him by his wife. Expert evidence was called to show that it was almost impossible for a would-be murderer to administer liquid chloroform by the mouth without arousing the victim; it was also stated that it was very difficult, especially for an unskilled person, to administer chloroform by inhalation during sleep without arousing the sleeper. The deceased's wife was with him at the time of his death, did not call the inmates of the house till long after, and had previously entered into some sort of understanding with a young Wesleyan minister to marry him if perchance her husband were to die. This young man had purchased the chloroform for her, and altogether the circumstances were very suspicious. The jury, however, acquitted the widow, apparently on the theory put forward by the judge that the man drank it himself when half under the influence of some of the narcotics with which he was being treated on account of necrosis of the jaw.

The list of names sent up for election by the Royal Society includes those of Surgeon-Major Timothy Lewis, Dr. Pye-Smith, and Mr. Victor Horsley. I regret extremely here to record that Dr. Lewis, who was the Assistant Professor of Pathology in the Army Medical School at Netley, died on May 7 of pneumonia, after a short illness and before his formal admission as a Fellow of the Royal Society. He was well known for his work in Calcutta with reference to the *Filaria sanguinis hominis*, and in conjunction with Dr. Cunningham on cholera. Dr. Pye-Smith was until a few years ago lecturer on Physiology at Guy's Hospital, and is now one of the physicians there: his election has come rather as a surprise. But the greatest surprise was the choice of Mr. Victor Horsley, who will be one of the youngest Fellows of the Royal Society: to him I have already had occasion to refer. He has done a great deal of first-rate original work, especially in connection with the functions of the thyroid gland and the localization of function in the brain. Still, it is very surprising to find so young a man chosen, now that Professor Sharpey, the great believer in young men, and in his time all-powerful in the Royal Society, has gone.

Dr. Oliver Wendell Holmes is being fêted by literary society here. His portrait appears in our illustrated papers, and everybody seeks to do him honor. Unfortunately, he does not appear disposed to give his professional brethren any taste of his after-dinner quality, and declined an entertainment arranged in his honor by the medical profession in Liverpool.

DAWSON WILLIAMS.

May 15, 1886.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN LARYNGOLOGICAL ASSOCIATION.

(Reported by WILLIAM H. MORRISON, M.D.)

THE Association held its Eighth Annual Session May 27, 28, and 29, 1886, in the hall of the College of Physicians, Philadelphia.

The meeting was opened by a short address by the President, Harrison Allen, M.D., who congratulated the Society upon the great advances made in laryngology, and directed attention to the valuable contributions made to it by Americans, and especially by the Fellows of this Society. Laryngology satisfies more nearly the requirements of exact science than almost any other department of medicine.

The first paper of the morning, by Harrison Allen, M.D., of Philadelphia, was entitled:

TWO INSTANCES OF ADENOID DISEASE OF THE ROOF OF THE PHARYNX WHICH EXHIBITED UNUSUAL FEATURES.

The first case was that of a boy, aged 5 years, who came under observation in January, 1884. Examination showed the roof of the mouth to be elevated; the irritability of the parts was so marked that the slightest attempt to depress the tongue was followed by gagging; the nostrils were filled with a mucoid discharge. The history of the case was that during the day there was no special difficulty with respiration, but at night the breathing was greatly impeded. After the child fell asleep, the respirations became labored; after three or four inhalations, breathing would cease, and the child would open its mouth and make strenuous efforts to inspire; this would awaken the child, and a forced inspiration would ensue; it would then fall asleep, and the same phenomena would be repeated during the entire night. During an attack of whooping-cough the symptoms became much exaggerated, and to them was added irregular action of the heart. Hypertrophy of the adenoid tissue of the pharynx, with unusual reflex symptoms, was believed to be the cause of the symptoms.

January 29 this tissue was removed, but the difficulty in respiration continued. The nasal cavity was now free from any obstruction. A portion of the tonsils, which were enlarged, was then removed; still there was no improvement. After careful investigation, it was found that during sleep the tongue fell backward. It was directed that, when the attack came on, the child should be turned on his face: this was done, with immediate relief. It was so arranged that the child should be under constant supervision during the night, so that when the interference with respiration occurred he could be turned upon his face. This plan has been followed by great improvement. The boy prefers to lie upon his side, but when a paroxysm comes on he turns on the face without awakening.

The second case was that of a girl, 6 years of age, in whom there were evidences of imperfect osseous development; the irritability of the pharynx was so excessive that no satisfactory examination could be made. The child had already been operated on by other surgeons for the removal of morbid tissue. Under ether, the naso-pharynx was found to be much smaller than normal and highly arched in form; the posterior slope of the roof was occupied with an adenoid growth, which was removed, partly by the galvano-cautery and partly with the scissors. Two weeks later, the patient was again etherized, and the thickened membrane cauterized with the galvano-cautery; the child was then given internally proper remedies for the perverted nutrition of the osseous system, and locally iodine and glycerin were applied: under this treatment improvement was shown. The child appears to have completely recovered.

DISCUSSION.

In the discussion which followed, Dr. Franklin Hooper, of Boston, related the case of a child 8 years old, of neurotic temperament, in whom breathing was obstructed, articulation defective, and hearing impaired since the age of three years. A large portion of adenoid tissue was removed from the pharynx, and at once there was improvement of articulation and in breathing; the hearing also improved after inflation with the air-douche. In the course of ten days after the operation the child developed chorea, which rapidly became intensified, assuming so severe a form as to prevent sleep and interfere greatly with alimentation. The ordinary remedies to produce sleep failed until urethan was used. After this the child had a good night's rest and immediately began to improve, and the chorea entirely disappeared.

Dr. Langmaid related a case in which attacks of dyspnœa in a child occurred which were relieved by the patient getting upon his hands and knees; the removal of the naso-pharyngeal fibroma was followed by entire disappearance of the symptoms.

Dr. Seiler said that even small growths, too small to affect respiration, impair the singing voice, and especially interfere with the higher notes of the scale.

Dr. Allen closed the discussion. He believed that there was no danger from using the galvano-cautery after etherizing the patient, provided the patient were fanned vigorously for a moment or two in order to dilute the ether-vapor below the point of ignition.

Dr. J. Solis Cohen then presented the following paper, by Professor Ramon de la Sota y Lastra, M.D., of Seville, Spain, which, on invitation, he read to the Society.

LUPUS OF THE THROAT.

The following case, illustrating the difficulty of diagnosis, was described. A patient, who was also a physician, came to him in 1884, on account of an affection of the throat. He was then 60 years of age, much emaciated, reduced in strength, and with a clay-colored complexion. The disorder in the throat had existed about a year. He was able to swallow only milk and broths. Upon examining him, the tongue was found covered with psoriatic scales, the pharynx was lumpy and of a wine-red color, the right tonsil was the seat of an ulceration extending from the pyriform fossa below to the middle of the uvula, and involving half that structure. Its borders were red and swollen, its surface irregular and of a hard and elastic consistence. Some pain was produced by palpation, but no

bleeding. There was no trouble in talking or on coughing, and liquids were swallowed without difficulty. Breathing was accomplished with perfect freedom. The submaxillary glands were swollen. The patient had suffered from rheumatism, but no history of syphilis could be obtained. Taking into consideration the history of the case and the age of the patient, it was considered an ulcerated epithelioma, and this diagnosis was concurred in by the patient's physician. Nevertheless, mistrusting the testimony obtained, antisyphilitic medication with mercurials was tried, which caused such bad results that it was necessary to suspend it. He was then placed upon the use of iron and bitter tonics and such diet as he could take. The specific treatment was subsequently resumed; but the local lesion assumed so bad an aspect that it became necessary to give up the treatment. From the fact that the ulceration was unattended by pain, I began to have some doubts as to its epitheliomatous nature. Sodium arsenite in ascending doses was then prescribed, with a gargle of resorcin, and locally I applied iodoform to the ulcerated surface after it was washed with a solution of borax. For a month the ulceration continued to extend, and when I had lost all hope it stopped its progress and became covered with healthy granulations. Cicatrization went on, and was complete in three months. The scar is irregular, elevated and depressed, hard and soft, the posterior portion being adherent to the pharyngeal wall. The lingual psoriasis continued. Restoration to health has taken place. It is now eighteen months since the ulcer healed. With this result, I concluded that the case was one of lupus, and not cancer.

My experience with this and other cases of lupus of the throat has led me to conclude that the disease may make its appearance at any period of life. I have seen it more frequently in adults than in children, and more frequently in men than in women. I have been unable to obtain any information in regard to inheritance. I have not found that hard drinkers or smokers were more liable to suffer, nor have I found that great exertion of the voice or exposure to irritating substances, the application of the cautery or other agents, had any influence in its production.

I have never had an opportunity of observing the initial manifestations; but I have been able to detect the involvement of sound tissues later in the disease. Sometimes the mucous membrane assumes a purple color, and swells up and becomes granulated. Then one or two nodules may develop, and may attain the size of a pea. Sometimes they become prominent without any alteration in the appearance of the mucous membrane. They may remain superficial, or they may attack the mucous tissue and also the submucous tissue. Their form is rounded, and their surface is smooth. These nodules are distinguished by their rosy-red color from leprous tumors. Unlike carcinoma, the tumors are usually quite distinct. On pressure they present an elastic resistance. This is greater than the hardness of inflammation, but less than that of epithelioma. The parts on which the tumor develops become rigid, and the natural movement is diminished or lost, contrary to carcinoma, which usually produces sharp, lancinating pain, and to leprosy, which is generally accompanied with anæsthesia. There is in lupus no alteration of the sensitiveness of the part. After a shorter or longer period, the tubercle softens and becomes ulcerated. The ulceration assumes two forms. In some cases the tumor becomes excavated to a considerable depth, while in others it is more superficial. These ulcers do not bleed on pressure. The cure is difficult, and attended with the formation of scars. In some cases these ulcers develop in a slow way, while in others they start with astonishing rapidity. They may develop within a few days, or they may remain quiescent for months or years and then take on destructive action. The healing of the ulcer is followed by the formation of irregular scars, raised in some places, depressed in others; red in the former, white in the latter. Adhesions to surrounding parts take place. Cicatrization occurs slowly and is easily destroyed, but more or less infiltration remains.

In the cases of lupus of the throat which I have seen, the treatment employed in external lupus has been also found of service. I do not discard internal treatment, but use such remedies as are indicated by the general condition of the patient. This has an important influence upon the result of topical treatment. If the lupus be not ulcerated, I apply caustic substances. Up to a few months ago I used tincture of iodine. I have, however, found better effects from the use of lactic acid. I have used it in cases of lupus of the cheek and gums and also of the larynx. I have met with no inconvenience from its use except the pain, which varies in different cases if the lupus is ulcerated. I sometimes use the lactic acid; more frequently I employ a wash of borax and cover the ulcer with powder of iodoform. I always prescribe a gargle of a one-per-cent. solution of resorcin. Patients thus treated have always recovered after a greater or less time. In some cases the cure has probably been realized in the natural course of the disease rather than as a result of the therapeutic measures.

Professor Joseph Leidy, of Philadelphia, on the invitation of the Council, made a verbal communication upon

SOME INTERESTING POINTS CONNECTED WITH THE LARYNX AND ITS INTRINSIC MUSCLES.

The first point to which I shall refer is the aperture of the larynx. This aperture,

communicating with the pharynx, is a large oblique opening, bounded above by the summit of the epiglottis and laterally by the aryteno-epiglottidean folds. The lower portion is formed by the notch of the arytenoid cartilages. Laterally on each side, two eminences are quite prominent in the fresh larynx, an upper pair and a lower pair. The lowest pair is produced by the cornicula of the larynx, which terminate the summits of the arytenoid cartilages. The text-books state that immediately above these there is another pair of cartilages, the cartilages of Wrisberg. In my experience I have rarely found these cartilages decidedly developed in the white subject, and where a prominence does exist it is due to the presence of a group of glands: embedded in these perhaps a little cartilage may be found. In the negro the cartilages of Wrisberg are conspicuously developed.

The next point refers to the vocal cords, as they are usually designated. These are described as two elastic ligaments extending from the entering angle of the thyroid cartilage directly backward and upward to be attached to the vocal process of the arytenoid cartilage. Between these cords is the narrowest portion of the larynx, or the fissure of the glottis. While physiologically it is correct to speak of the vocal cord, yet anatomically it is not correct to speak of vocal cords. These bands are usually spoken of as the inferior thyro-arytenoid ligaments. There is another ligament extending between the thyroid and cricoid cartilage in front and extending back to the base of the arytenoid cartilages. This is described as the middle crico-thyroid ligament. This is connected with the upper border of the vocal membranes. This connection is very important. If the cricoid cartilage is broken or crushed, it must influence the action of the so-called vocal cords, for the vocal membranes are connected quite as much at the lower border to the cricoid cartilage as they are at the upper border to the thyroid cartilage.

The tension of the vocal bands is principally regulated by the movements of the muscles attached to the arytenoid cartilages. These are supplied by the inferior laryngeal nerve. Another muscle which may influence the movements of the vocal membranes is the crico-thyroid. This is supplied by a separate nerve, the superior laryngeal; though the reason why this muscle should be supplied by a different nerve has not been satisfactorily stated. The muscles which operate the arytenoid cartilage are the posterior crico-arytenoid, the lateral crico-arytenoid, and the arytenoid muscle. These muscles are sufficient to produce all the movements of the vocal membranes. Other muscles, that is to say, the aryteno-epiglottidean and the thyro-epiglottidean muscles, have been described, but in my experience the development of these muscles is by no means uniform, and they are often rudimentary.

A vote of thanks was tendered Prof. Leidy for his communication. The paper was discussed by Dr. J. Solis Cohen, Dr. F. I. Knight, and Dr. F. H. Hooper.

Dr. J. N. Mackenzie, of Baltimore, exhibited an instrument for fracturing the nasal septum, which differed from the usual instrument employed for the purpose in being stronger and in having the handle at an angle to the blades, so as to give greater leverage.

Dr. Carl Seiler, of Philadelphia, exhibited an apparatus to be used in making sections of frozen heads. Sections were exhibited. He said that they might be electro-plated if desired, and preserved indefinitely, or wax impressions taken.

Dr. C. E. Sajous, of Philadelphia, presented a galvano-cautery handle, in which the wires were attached in the middle of the instrument, and explained a device for connecting the handles to the wires without screws.

Dr J. H. Hartman, of Baltimore, exhibited a form of écraseur with extremities of different shapes, which could be used for various purposes in the nose, pharynx, or larynx.

Afternoon Session.—The first paper presented was by Dr. F. H. Hooper, of Boston, entitled

CONCERNING THE POSITION OF PARALYZED VOCAL BANDS.

The paper was in part based on experimental work done in the physiological laboratory of the Harvard Medical School, and in part theoretical. Specimens and drawings illustrating certain points were shown. The lecturer stated that it was his purpose to inquire into certain influences which might combine to determine the positions of paralyzed vocal bands, and to ask whether we are always justified in assuming that a given position of immobile vocal band was indicative of the arrested function of this or that muscle of the intrinsic laryngeal groups. The speaker thought that a vocal band might assume different positions in cases of complete paralysis of the recurrent nerve, and he passed in review certain anatomical factors and physical causes which he thought might contribute towards producing the position which might happen to be present when seen reflected in the laryngeal mirror.

Dr. Hooper concluded by saying that, in his judgment, the larynx is such a complicated organ anatomically, it is subject to such changes at different stages of life, its shape is so different in different individuals, its nerve-supply is so great, the arrangement of its muscles is so liable to anomalies, that as surely as one attempts to formulate theories on the positions alone of paralyzed vocal bands,—positions which may be controlled by intrinsic muscles of the larynx that are not paralyzed, as well as by those that are,—

just so surely will one be led unconsciously into erroneous mental inferences.

The next paper was by Dr. J. Solis Cohen, of Philadelphia, and related the further history of a case of "Paralysis of the Posterior Crico-Arytenoid Muscles," presented at the first meeting of the Association in 1879, with a report of the autopsy and the exhibition of a specimen.

Dr. Frank Donaldson, Jr., of Baltimore, read a paper on

THE FUNCTIONS OF THE RECURRENT LARYNGEAL NERVE, FROM AN EXPERIMENTAL STUDY IN JOHNS HOPKINS UNIVERSITY.

The speaker first referred to the fact that all the muscles, with the exception of the crico-thyroid, are supplied by the recurrent laryngeal nerve. The nerve therefore contains fibres controlling both phonation and respiration, acting both upon the abductor and upon the adductor muscles. He then referred to the experiments performed by Dr. Hooper, of Boston, the results of which had been presented at the last meeting of the Association. Dr. Hooper had found that the constrictors cease to act when consciousness is suspended by the action of ether, and that abduction with dilatation of glottis is obtained by stimulating the recurrent laryngeal nerve when consciousness is suspended. He therefore concluded that the constrictors do not cease to act during profound narcosis or in suspensions of consciousness from any cause, and that abduction is not always obtained when consciousness is suspended. It is with weak currents that abduction is produced, but as the stimulation is increased adduction takes place.

Dr. Hooper said that he regretted exceedingly that the lecturer had so evidently misunderstood and misinterpreted him, and could only attribute it to the circumstance that Dr. Donaldson had not read the paper he had quoted from. He offered to demonstrate to Dr. Donaldson the truth of his statements made two years ago, if he would come to Boston.

Drs. F. I. Knight and S. Solis Cohen also discussed the paper.

Dr. F. I. Knight, of Boston, read a paper on

LARYNGEAL VERTIGO.

A number of cases of what is called laryngeal vertigo have been reported by various authors. The distinctive feature of these cases is that attacks of coughing are followed by giddiness and momentary loss of consciousness: this latter symptom was present in all but two cases. While it is probable that attacks of dizziness after coughing are not rare, yet little attention has been paid to the subject. The writer had been able to find fourteen published cases; to these he added two coming under his own observation.

The following points were obtained from a study of the reported cases. All the cases, with the exception of one, have been in males; the cough which induced the attack was slight in six cases, spasmodic in two, and severe in three; momentary loss of consciousness occurred in fourteen cases; one case fell, but declared that he had not lost consciousness; dizziness is mentioned in eleven cases; in four cases there seems to have been decided evidence of laryngeal spasm; in one this was doubtful; in four cases there was marked congestion of the head and face; in two the patients were pale; convulsive movements of the limbs occurred in three cases; in one the movements affected the face and head, and in another the face. In these cases there was no biting of the tongue, no frothing of the mouth, and no involuntary micturition. The speaker objected to the term laryngeal vertigo. There probably is no real vertigo in these cases in the sense of the vertigo seen in aural vertigo: there is simply giddiness or lightness of the head. These cases cannot be considered to be cases of petit mal.

The cause of the attacks is disturbance of the cerebral circulation, perhaps due to the compression of the large blood-vessels of the chest, and perhaps the heart. Even without this, the effect of rapid breathing is well known. This causes marked cerebral disturbance.

Dr. Frank Donaldson, of Baltimore, presented a paper on

A CASE OF CONGENITAL DEFECT OF THE EPIGLOTTIS, ILLUSTRATING A FUNCTION IN DIGESTION,

which was read by title.

D. Bryson Delavan, M.D., of New York, read a paper on

BUCCAL TUBERCULOSIS.

He had seen six cases of this affection. In the reports of twenty-four cases of tuberculosis of the tongue, in all but one the subjects were males. In twelve cases the lesion was anterior, in seven upon the side, and in one at the base of the tongue; in four the situation was not stated. The disease was primary in nine cases, secondary in seven cases; in the remaining cases it was not stated whether the disease was primary or secondary. The longest duration of a case of primary tuberculosis was two and one-half years, the shortest ten weeks. The age of the oldest person affected was seventy years, and of the youngest not under twelve.

The first case coming under the speaker's observation was H., aged 35, a laborer. His family history and previous history were good. The man was remarkably robust. Six weeks before coming under observation he experienced pain at the base of the tongue. This pain became excessive, and at the end of two weeks he was obliged to give up work. On examination, a fissured and ulcerated sur-

face was found at the base of the tongue on the right side. This lesion was indurated. In the centre was a large ulcer, with large flabby granulations. On the right side externally, under the angle of the jaw, was a hard tumor about the size of a chestnut. There was slight fœtor of the breath. The diagnosis was uncertain. The pain was so severe as to prevent sleep. An application of a four-per-cent. solution of cocaine checked the pain for five hours. The patient's condition became so serious that he was removed to the New York Hospital, where, under the idea that the disease was epitheliomatous, the complete removal of the tongue was made. The patient recovered rapidly from the operation, and there was marked improvement in the general condition. It has been impossible to find any evidence of disease of the lungs or other internal organs. On microscopic examination, all the parts present abundant tuberculous material. A point of interest in this case is that this is the first case on record in which such an operation has been followed by an apparent cure. Of course, sufficient time has not elapsed to speak positively as to the ultimate result. The operation was done in the latter part of December, 1885.

Dr. Shurly, Dr. J. S. Cohen, and Dr. Roe took part in the discussion.

Adjourned.

Second Day, Morning Session.—The following officers were elected: *President*, Dr. E. Fletcher Ingals, of Chicago; *First Vice-President*, Dr. E. Carroll Morgan, of Washington; *Second Vice-President*, Dr. J. N. Mackenzie, of Baltimore; *Secretary and Treasurer*, Dr. D. Bryson Delavan, of New York; *Additional Member of the Council*, Dr. F. H. Hooper, of Boston.

The following active members were elected; Dr. Benjamin F. Westbrook, of Brooklyn; Dr. Frank Donaldson, Jr., of Baltimore; Dr. Alexander W. MacCoy, of Philadelphia; and Dr. J. C. Mulhall, of St. Louis.

Professor Ramon de la Sota y Lastra, of Seville, Spain, was elected a Corresponding Fellow.

A proposition in reference to the formation of a Congress of American Physicians and Surgeons was presented. The proposition was approved, and the following committee, taken from the ex-Presidents of the Society, was appointed to confer with committees from other Societies: Dr. J. Solis Cohen, of Philadelphia; Dr. G. M. Lefferts, of New York; Dr. F. I. Knight, of Boston; Dr. F. H. Bosworth, of New York; and Dr. E. L. Shurly, of Detroit.

It was decided to hold the next meeting in Chicago, the time, the first Thursday in June, 1887.

The first scientific paper was by Dr. E. L. Shurly, of Detroit, giving observations on the use of some of the newer remedies in diseases of the upper air-passages.

Dr. William H. Daly, of Pittsburg, read a paper on

THE SIMPLEST AND MOST EFFICIENT TREATMENT OF DIPHTHERIA.

The speaker stated that he did not intend to offer a new treatment, nor one which would cure ninety or one hundred per cent. of the cases. He would not discuss the point whether diphtheria and croup were identical. His object was to describe the calomel treatment. This is an old treatment. It is mentioned in the writings of Rev. Sydney Smith. About 1779, Sydney Smith's daughter, when six months old, was taken sick with a violent attack of croup. Dr. Hamilton, of Edinburgh, was sent for, but, not being able to come, sent directions to "give the child two grains of calomel every hour, and to persevere. He had never known this to fail." This was done, and the child recovered.

The credit of practising and recommending this treatment in modern times belongs to Dr. William C. Reiter, of Pittsburg. Of the different forms of mercury, calomel is the best. The drug is to be given in doses of from two to five grains every one, two, or three hours. It may be given dry and washed down with a little ice-water, or it may be given in water. This is to be continued until the stools become frequent and contain in them gelatinous masses of a bright-green color, resembling chopped spinach. Then the interval is to be lengthened, and the drug continued so as to keep up this condition of catharsis, the patient having two or three stools each day. It is better to lengthen the interval than to diminish the dose. In this way there is less liability to induce ptyalism.

The speaker had found it the most efficient of any treatment that he had employed, and it was the simplest to use. The cardinal rule in the treatment is to give the calomel until the condition of catharsis described has been produced. Under this method a greater number of cases will be saved than under any other proposed method.

Discussed by Drs. Shurly, Donaldson, Robinson, Bosworth, and Mackenzie.

Dr. E. Carroll Morgan, of Washington, then read a paper on

THE QUESTION OF HEMORRHAGE AFTER UVULOTOMY, WITH THE DESCRIPTION OF AN INSTRUMENT FOR ITS ARREST.

He described the following case. A man, aged 28 years, whose uvula had been excised five days previously by another operator, came to him with the statement that the bleeding came on four hours after the operation, and had continued at intervals since then, a large quantity of blood having been lost. Various means had been tried to stop the bleeding, without success. The parts were covered with a coagulum of the persulphate of iron. This was removed, and the

parts cleansed. The bleeding points were then seen. The uvula evidently had been greatly hypertrophied. The scissors had been used in the operation. There was no evidence of the hemorrhagic diathesis in this patient or in any member of the family. The parts being cleansed, the stump was seized with dressing-forceps, and the hemorrhage was controlled. The galvano-cautery was applied, and the bleeding stopped. In nine hours it recurred. The cautery was again used, and the stump dusted with the persulphate of iron. The following morning a copious hemorrhage took place, not less than a drachm a minute, by actual measurement, being lost. A careful examination was then made to detect any other source of hemorrhage, but none could be found. Chromic acid was then used, and the hemorrhage stopped. At three o'clock the same day copious bleeding recommenced. Galvano-cautery was again employed. There was not room for the application of a ligature. Torsion was tried, without success. A small clamp (used in retaining shirt-sleeves in position, with the spring weakened, and the teeth filed down) was then applied. A string was attached to this and brought out of the mouth. This checked the bleeding, and was allowed to remain for several hours. It was then removed, and the bleeding did not recur. A search of the literature of the subject failed to show any instance in which such a procedure had been before adopted. In this case he thought that this device had saved the patient's life.

A careful study of the subject had enabled him to find seventeen other cases in which the hemorrhage after this operation had been profuse. Where the bleeding is persistent, it is always arterial in character.

The speaker, in conclusion, said that a fatal hemorrhage had never followed uvulotomy. A persistent, alarming hemorrhage is encountered only in the rarest instances. A moderate bleeding, stopping spontaneously or by the use of the mildest applications, occasionally happens. A loss of a few drops of blood at the time of operating, followed by a slight oozing, is a common occurrence.

The most reliable surgical measures for controlling uvular hemorrhage are ligature, compression by a clamp or forceps, and the use of the actual cautery. The most reliable styptics are, in the order named, solid nitrate of silver, persulphate of iron, gallic acid, tannic acid, alum, the local use of ice, and vinegar. The most reliable systemic remedies are opium, acetate of lead, sulphuric acid, and ergot.

To the paper was appended an exhaustive bibliography.

The speaker recommended that in operating the object should be to restore the uvula as nearly as possible to its normal size, and that the entire uvula should not be removed.

Discussion by Dr. Hooper, Dr. Donaldson, and Dr. Daly.

Afternoon Session.—Dr. Thomas R. French, of Brooklyn, presented a paper entitled

THE LARYNGEAL IMAGE AS SEEN IN PHOTOGRAPHS TAKEN DURING THE PRODUCTION OF TONES IN THE SINGING VOICE.

The speaker had made numerous investigations on this subject, and his observations failed to confirm the statements of most authorities in regard to the position of the vocal cords during the production of different notes. Different individuals evidently use different mechanisms in the production of different tones. The general result of his investigations seemed to indicate that in the production of low notes the vocal cords are separate to a greater extent posteriorly than anteriorly, in the production of the middle tones the vocal cords are parallel, and in the production of high notes the opening is widest in front.

The paper was illustrated by numerous photographs thrown upon a screen.

The following papers were then read by title:

"Clinical Notes on Prolapse of the Laryngeal Ventricles," by Dr. George W. Major, of Montreal.

"Three Cases of Thyrotomy; Recovery in Each Case with Good Voice," by Dr. Clinton Wagner, of New York.

"Alarming Hemorrhage after Tonsillar Excision arrested by Torsion of the Artery," by the same author.

Dr. William C. Jarvis, of New York, then read a paper on

A NOVEL PROCEDURE FOR THE REMOVAL OF SUBGLOTTIC LARYNGEAL GROWTHS.

J. C., aged 35 years, consulted me for the relief of a difficulty of speech and of breathing. The trouble with the voice was noticed two years before; the difficulty in speech appeared one year before coming under observation. The laryngoscope showed a mass of papillomatous tissue occupying the cavity of the larynx. The vocal cords and ventricular bands were not involved. The attempt was made to seize them during phonation, with the Mackenzie forceps. Only a few pieces were removed. The écraseur was then tried, but it was found impossible to use the instrument, on account of the wire being seized by the spasmodic contraction of the vocal bands and displaced. Chromic acid applications were then tried, but, although the growth was touched, it was found impossible to limit the application to the diseased structures. The patient then disappeared, and did not return for a year. His condition was then much worse, and the difficulty of breathing had greatly increased.

I then determined to try the following plan, and, if this failed, to remove the growth through

an opening in the windpipe. Forceps similar to the Mackenzie instrument, but heavier, were secured. Through the tips of the blades holes were drilled, and through these was passed a piece of No. oo piano wire, which was conducted through a second opening at the angle of the blades and out to the handles, where it terminated in a loop into which the extremity of the index-finger could be placed. When the blades were separated, this wire formed a cross-bar uniting their extremities. When the blades were closed, the loop of wire could be drawn up by the finger. The operation was performed without an anæsthetic. The tongue was depressed, and with the aid of the mirror the forceps were introduced into the cavity of the larynx. The mirror was then removed and the forceps carried down to the glottis, through which the tip of the instrument was forced with considerable trouble, on account of the spasm. The instrument was carried into the trachea sufficiently far to be sure that it was below the attachment of the growth. The blades were then separated, and, pressing against the anterior wall of the larynx, the instrument was gradually raised until the wire was caught. The blades were then closed and clamped, the loop of wire drawn in, and the forceps removed, bringing with it a growth. The laryngoscope showed a second growth, which was removed in the same way. Breathing was at once rendered easy, and the speech became natural. The patient said that the presence of the forceps caused no pain, although uncomfortable. This is the only case on record of the removal of a subglottic tumor without anæsthetization and without an opening into the larynx.

T. Amory De Blois, M.D., of Boston, read a paper on

CASES OF LARYNGEAL ŒDEMA.

The author gave brief details of fourteen cases of laryngeal œdema coming under his observation. All of these cases recovered, six under the use of astringents and eight after scarifications.

A paper by Dr. Charles H. Knight, of New York, describing

A CASE OF PERICHONDRITIS OF THE LARYNX,

was read by title.

Dr. Edgar Holden, of Newark, New Jersey, described

A CASE OF GUMMATOUS DISEASE OF THE LARYNX, WITH SPONTANEOUS REOPENING OF THE LARYNX AFTER THYROID LARYNGOTOMY.

L. D., aged 35, presented himself, May 30, 1885, with dyspnœa and aphonia. Examination showed a cicatrix on the epiglottis, and the left side of the larynx presented a rounded mass of dull appearance. He denied syphilitic infection. After a careful consideration of the case, the probabilities were thought to favor syphilis, and he was given iodide of potassium in large doses. There was improvement for a short time, but he soon became intolerant to the drug. Thyroid laryngotomy was considered necessary, and was performed. The tumor was removed with the écraseur. No ulceration was visible. Tracheotomy was then performed, and the upper incision closed with sutures. The patient did well, and the tube was removed on the tenth day. The external wound healed. He insisted on returning to his home, where the surroundings were very unfavorable, and his health deteriorated. On the fortieth day after the healing of the wound, the laryngeal incision was torn open by a severe cough. He refused to return to the hospital. Examination of the larynx showed no disease. Under the surroundings it was impossible to get the wound to heal. His health continued to run down, and six months and fourteen days after the operation the patient died of exhaustion. The patient had lived five months with an opening in the larynx.

Dr. U. S. Hitchcock, of New York, read a paper on

GUMMATOUS INFILTRATION OF THE BASE OF THE TONGUE,

giving the details of four cases coming under his observation.

Saturday, Third Day, Morning Session.—A paper by Dr. S. Solis Cohen, of Philadelphia, on

A CASE OF HYSTERICAL SNEEZING APPARENTLY CURED BY APPLICATIONS TO THE NASAL PASSAGES OF THE CONTINUOUS BATTERY CURRENT,

was read by title.

Dr. John N. Mackenzie, of Baltimore, presented a paper entitled

A CONTRIBUTION TO THE PATHOLOGY AND TREATMENT OF THE RESPIRATORY VASO-MOTOR NEUROSES.

The naso-bronchial tract is frequently the seat of periodical vascular disturbance, in which explosions of nerve-force play a conspicuous part. These probably depend upon some form of sympathetic or vaso-motor irritation. Into the production of such conditions two elements enter,—a depraved state of the nerve-centres and an abnormal excitability of certain portions of the naso-bronchial tract. In hay-fever we are dealing with a neurosis. In this connection he called attention to a neurosis of the aural cavity which was closely allied to vaso-motor coryza and also to a similar condition of the conjunctiva. These cases are a further evidence of the sympathetic nature of these affections. The older writers were evidently familiar with hay-fever, but they confounded it with the bronchial asthma of the present day. Asthma is

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looked upon as a disease *per se*, but, like many other disturbances of respiration, it has no particular lesion, and is common to many pathological states. It, like cough, is most commonly symptomatic of some disorder of the respiratory tract. An interesting feature in a certain proportion of cases is the association of urticaria with coryza. This is a familiar observation. The speaker then considered the relations between the skin and the respiratory tract. He regarded the skin as having a function similar to that of the lungs. On the principles which he explained he based the treatment of hay-fever, or periodical vaso-motor neurosis of the respiratory tract. In the greater number of cases the nasal passages were the seat of the vascular disturbance. Next in frequency came the pharynx. Occasionally it was localized in the laryngeal cavity. In whatever portion the vaso-motor neurosis is situated, the general principles are the same. The treatment of one of these affections is essentially the treatment of the others. Hay-fever and asthma may be classed as symptoms owing their origin to a similar cause.

In the treatment of hay-fever the chief indications are to remove any existing local respiratory disease, to so alter the nutrition of the nerve-centres that they may not respond so easily to irritation, and to search carefully for pathological conditions and adopt appropriate treatment for their removal when found.

These chronic neuroses require chronic treatment. The peculiarity of the sympathetic is with the patient all the time, by night and by day, and at any moment may give evidence of its presence by a paroxysm. Any treatment which is practised simply during the attack, or immediately before, is simply palliative. In reference to the use of cocaine, he had found that it increased the irritability of these structures, and its application to the erectile tissue may ultimately weaken the cell-walls. He, however, did not question the excellent virtues of this remedy in certain acute affections. In hay-fever he had failed to find improvement after its use. For a short time amelioration was produced, but in the course of an hour the symptoms recurred. His custom is to treat hay-fever as any other chronic disease of the nervous system. He insisted upon a prolonged tonic course of treatment during the intervals. This may at first fail, but if persisted in the time will come when, if there is no incurable lesion, the paroxysms will diminish in severity and frequency. The great mistake is made in the suspension of the treatment upon the termination of the attack. Among the remedies for the constitutional management of this class of cases he recommended phosphide of zinc (gr. $\frac{1}{16}$), quinine (2 grs.), and ext. nux vomicæ (gr. $\frac{1}{4}$). This may be given in pill form before meals.

After meals he directs that from three to five drops of liquor arsenici et hydrargyri iodidi be taken in a wineglassful of water. A similar line of treatment had been employed for several years by the speaker in simple inflammatory conditions of the nose and throat with good results. He had also employed bromide of potassium with advantage. A constant current of from ten to fifteen cells, with one pole over the nape of the neck and the other over the region of the superior cervical ganglia, or in the nasal passage, had in a few cases been beneficial. In one case improvement followed the obliteration of vessels on the posterior wall of the pharynx.

In regard to topical applications to the existing nasal conditions, these accomplish one result only. They close one door to irritation of the nerve-centres. In many cases this is of itself sufficient. There are other cases in which such a course will fail. In these neuroses we cannot expect to eradicate the disease thoroughly until the sympathetic-nerve-irritation is overcome.

DISCUSSION.

Dr. William H. Daly, of Pittsburg, stated that the iodide of sodium in small doses had given him better results than any other single remedy. He insisted that all cases of this kind be subjected to a thorough inspection.

Dr. C. E. Sajous, of Philadelphia, in referring to the treatment by the galvano-cautery, stated that in the early part of his experience he had obtained excellent results. Last year he met with a number of unsatisfactory cases. Although all the cases were benefited, absolute relief was obtained in not more than forty-five per cent. Some of the cases treated two years ago, and which escaped the attack the following year, had a recurrence last year. Some of the cases, however, have entirely escaped. One case, treated in 1881 with glacial acetic acid, has had no recurrence.

Dr. Carl Seiler, of Philadelphia, thought that some failures in the treatment of hay-fever might be explained by the suggestion thrown out in the paper read. The Schneiderian membrane is not the only source of irritation of the vaso-motor nerves. The source of irritation may be situated in the pharynx or in the larynx.

Dr. Samuel Johnson, of Baltimore, read a paper entitled

A CASE OF NASO-PHARYNGEAL GROWTH,

describing a case in which, when the growth had been cut through about two-thirds, the shaft of the instrument broke, leaving the wire and about three-fourths of an inch of the instrument attached to the growth. An attempt was made to apply a second écraseur, but this failed. After trying to remove the portion of instrument broken off, it was decided to wait a short time and allow the growth to slough off. Four days later the at-

tempt to apply an écraseur was again made, and succeeded without difficulty. The tumor measured one and one-half inches in diameter, and was fibroid in character.

Dr. C. C. Rice, of New York, then presented a paper on

WHAT CASES OF NASAL CATARRH REQUIRE SURGICAL TREATMENT?

The speaker held the view that almost every nasal chamber will exhibit irregularities and abnormalities of some kind. The introduction of more improved methods of determining the locality of inflammation has led to a more frequent resort to surgical measures. Not every case of anterior hypertrophy should be operated upon. The erectile tissue in this situation serves a valuable physiological function in swelling up and excluding irritating particles from the lungs. In determining whether or not an operation is required, the sensations of the patient should be taken into consideration with the results of the examination. If, after the use of a four-per-cent. solution of cocaine, sufficient hypertrophy to interfere with breathing is still apparent, it should be removed.

DISCUSSION.

Dr. F. H. Bosworth, of New York, maintained that the erectile tissue of the nose does not exist. The membrane assumes the prominent position only as a morbid condition. There is no physiological function subserved by its swelling up. He considered it a mistake to suppose that we have morbid conditions in every nose. The healthy nasal cavities present a typical appearance.

The President, Dr. Harrison Allen, called attention to the fact that in man the nasal chambers are exceedingly degenerate. There is no animal in which the nose is so small in comparison with the rest of the face as in man. It is well known that structures which are passing through a process of degeneration are exceedingly variable. So it is with the human nasal chambers.

All animals with short faces, as the rabbit and cat, have these erectile bodies on the nasal chambers. He held that the object of these bodies was obstructive, and that by swelling up they protected the portions behind. If that be the case, he did not see why we cannot admit that this same erectile tissue exists in man. In his opinion the erectile tissue does exist, and is protective and obstructive in its functions.

The following papers were read by title:

"Inflammation of the Antrum," by Dr. Beverley Robinson, of New York.

"Additional Notes on a Case of Erysipelas of the Larynx," by William Porter, M.D., of St. Louis.

After some discussion, the report of the Nominating Committee was amended, and it was decided to hold the next meeting in New York City, the time to be fixed by the Council.

A vote of thanks was then tendered the Philadelphia College of Physicians, the Union League Club, the University Club, and the Managers of the Pennsylvania Hospital, for courtesies extended.

On motion of Dr. Daly, a vote of thanks was tendered to the Secretary, Dr. W. B. Delavan, for his valuable services.

The Association then adjourned.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

THE Thirty-Seventh Annual Session of the State Medical Society was held June 2, 3, and 4 at Williamsport, the Association being the guest of the Lycoming County Medical Society, which tendered the compliment of a reception and supper on the first evening to the visiting members and friends. The attendance of delegates and permanent members was over two hundred, and good order was preserved by the President, Dr. E. A. Wood, of Pittsburg, who is an excellent presiding officer. During the session a visit was paid to the Williamsport Hospital, an isolated, roomy cottage-hospital of about twenty beds, under the charge of a woman superintendent and resident physician, Dr. Church, where the Ladies' Aid Society held an impromptu reception, which was one of the most enjoyable events of the session. Reno Post, G. A. R., also tendered a reception to the members of the Society. The meetings were held in the Academy of Music, which was commodious and offered abundant accommodations. By what we must regard as an error of judgment, the last day's session was practically abolished in order to allow a comparatively small number of those in attendance to take an excursion to Watkins Glen, which was pleasant enough, but should have been put off until the regular business of the session had been accomplished. As a result of this encroachment, the affairs of the session were hurried, and there was very little time in which to consider important business or to devote to intelligent discussion of the papers.

The meeting was opened with prayer at each morning session. The President called the Society to order at 9 A.M., June 2. Dr. T. H. Helsby, of Williamsport, delivered the

ADDRESS OF WELCOME.

The Society last met here fifteen years ago, and the pleasant and profitable influences of that meeting are still felt. Many honored members who were a power in your councils and who took an active and prominent part in your deliberations are no longer with us; Worthington, of Chester, James S. Carpenter, of Schuylkill, John L. Atlee, of Lancaster, King, of Allegheny, Wallace and Bennett, of

Erie, Rutherford, of Dauphin, Priestly and Hall, of Northumberland, Crawford and McVicker, of Lycoming, W. A. Atlee, Bolles, Fish, Hodge, Mayberry, Nebinger, Albert H. Smith, and Townsend, of Philadelphia, are no longer with us; but we miss, more than all, "that distinguished member of the profession who presided over your deliberations on that occasion, and whose memory is dear to the entire medical profession of the great commonwealth, S. D. Gross, of Philadelphia. These have been called away from the field of their earthly labors,—some in the maturity of age, and others in the strength of manhood,—reminding us of our own mortality and that we in turn must become the victims of the limitations of our art, and enforcing the humiliating conclusion that medical science, notwithstanding its progress, is powerless in the presence of the grim destroyer, Death.

"It is a subject for cordial congratulation that since your last session in this city your Society has grown in numbers and usefulness. Of the sixty-seven counties of our State, fifty have regularly organized County Societies, with representation in your body. Your roll of permanent members has increased from four hundred to over one thousand. Surely there must be some intrinsic worth in an Association which can unite so many intelligent and reflecting minds, which can bring together at the annual meetings so many representatives from every section of the State, withdrawing them from the duties of an exacting profession, and, in a spirit of self-sacrifice and devotion to their art, to renew their co-operative efforts for the advancement of medical science, the elevation of professional character, the extension of the bounds of medical knowledge, and the promotion of all measures adapted to the relief of suffering, the improvement of the health and the protection of the lives of the community. No more important objects could possibly have engaged your attention, none which more deeply affect the vital interests of all classes of society."

Reviewing the scientific objects for which the Society was organized, he declared that the defective preliminary education of the physician is the great obstacle to the elevation of medical practice.

"One of the most serious obstacles to the efforts of your Society to elevate professional character and to place our profession in that position of honor and respectability which it should occupy in the estimation of the community, is to be found in the imperfect and defective education of those who enter upon the study of medicine. You have endeavored to remedy this evil by requiring each County Society to examine all students as to their preliminary education, but your efforts in this direction have been defeated by the facilities afforded to the ignorant and illiterate to crowd the ranks of the profession through the indefinite multiplication of medical schools throughout the country, bidding for and even entreating public patronage by offering a full course of instruction on easy terms, and presenting inducements to the half-educated and even wholly uneducated youth of the country to become physicians. It is this cheapening of medical education that tends more than all other causes combined to make the practice of medicine a trade, and it should receive the unqualified censure of the whole profession. The law of self-preservation bestows the right, and the disastrous consequences to the public impose the duty, of restraining within just bounds the power of these traders in medical education to disgrace the office of teacher and destroy the respectability of the medical profession in the eye of the world. We should exert every effort to establish a State board of examiners, who should have control of medical practice, and an examination by whom should be an indispensable condition for determining the qualifications of all who desire to enter upon the practice of medicine, 'without regard to when, where, or how they obtained medical education.' Let the colleges teach and examine and graduate as at present, but let no one practise in this State who has not passed an examination by those who have no interest in passing or rejecting him."

This interesting address concluded with advice to physicians to avoid professional jealousy and strive for the elevation of professional character, and ended with a greeting and welcome again to Williamsport.

Dr. Helsby presented the programme, which was adopted. He also announced the reference to the Judicial Council of a protest against the delegates from Philadelphia County, on account of the contested election.

The Secretary called the roll: one hundred and eleven names were reported on the register.

The following was offered by Dr. Parish, who asked that it be re-adopted, it having originally been approved by the Society in 1882:

"*Resolved*, That this Society reaffirms its adherence to the principles of the Code of Ethics of the American Medical Association, and declares that, in its opinion, for a physican to extend professional recognition to irregular practitioners is to patronize and encourage irregular practice and is alike inconsistent with honesty of purpose and the pursuit of medicine as a science."

The resolution was unanimously adopted.

The report of the Committee on Programme was criticised, as a gentleman appointed to read an address was not a member of the Society, having been prevented from registering until the protest against the Philadelphia County Society could be decided.

On motion, an invitation was extended to Dr. Sajous to deliver his address on "Laryngology" in accordance with the programme.

Dr. H. H. Smith made the report from the American Medical Association at St. Louis, signed by all the delegates save one. A minority report was made by Dr. Charles K. Mills. Both were referred to the Committee on Publication.

Dr. Dulles proposed to appeal from the decision of the chair, and moved that when protests are entered against delegates, they shall not be deprived of the rights of delegates until the protests are disposed of. The resolution was laid on the table.

Reports from the various County Societies were called for, with but few responses.

Dr. T. Parvin, of Philadelphia, an ex-President of the American Medical Association, was invited to a seat upon the platform.

Dr. E. Jackson, of Philadelphia, Chairman of a committee appointed at the last meeting, reported the draught of an act to establish a State Board of Examiners and Licensers, composed of members of the profession to be nominated by State Medical Societies and appointed by the Governor,—no physician connected with a medical college as a teacher to be eligible. After some discussion, a motion to postpone indefinitely was lost, and it was made the special order for the next day.

(To be continued.)

PHILADELPHIA ACADEMY OF SURGERY.

A STATED meeting of the Philadelphia Academy of Surgery was held May 3, 1886, the President, Dr. D. Hayes Agnew, in the chair.

Dr. J. H. Packard reported a case of

RUPTURED URETHRA AND ENORMOUS DISTENTION OF THE BLADDER.

I wish to mention a case of stricture of the urethra with rupture and enormous infiltration of urine. The man was brought into the hospital last Wednesday with an immensely-distended bladder and the condition which I have mentioned. The root of the penis was beginning to slough. The man was in an extremely prostrated condition, having passed urine only drop by drop for four days. There was enormous swelling of the scrotum and perineum, all the landmarks having disappeared. There seemed to be nothing to be done except to open the bladder above the pubes. Cutting through greatly-thickened skin, I opened an abscess before reaching the bladder, and then passed in a curved trocar, evacuating a large quantity of urine. I then incised the skin of the scrotum and perineum freely. One incision was made in the median line, but no urine escaped through it, nor has any escaped up to the present time. I then applied a charcoal poultice. The dusky discoloration of the skin rapidly disappeared as soon as the tension was removed. There was an enormous flow of serum, smelling strongly of urine, from all the incisions. The man has since done well, although a large amount of slough has been removed from the wound in the hypogastrium, and also from the root of the penis. The swelling has now all gone down, and the man thinks that he passes considerable urine by the urethra, but the greater portion probably comes from the wound in the hypogastrium. I kept a drainage-tube in for several days, but, as it passed through a mass of slough, it seemed as though little additional damage would be done by the contact of urine, and I therefore removed it. This is the fifth day, and, as I have said, the patient is doing well. This seems to be one of those cases in which the most unfavorable condition may promise success where apparently simpler cases will die. The method of operating also makes it interesting. I know that some of my friends differ very radically from me, yet I cannot help thinking that a very excellent method of treating retention of urine with stricture is not to carry out the principle, which I know is perfectly tenable, that by trying the patient you can get through every stricture with an instrument. I think that in many cases where there is great difficulty in instrumentation it is really better to aspirate and draw off the urine, and if necessary repeat this in twelve or twenty-four hours. In the course of twenty-four or forty-eight hours an instrument can be passed with greater ease than if the attempt to pass a sound had been persisted in.

In regard to fixing tubes in the bladder, there is a simple plan which I adopted in an œsophagotomy which I performed five or six years ago. This consists in taking a large drainage-tube and inserting within it a metal ring grooved on the circumference. This ring fills the tube. About it is twisted a silver wire formed into a loop on each side. To these loops tapes may be attached. If it is desired to close the tube, the portion beyond the ring is two or three inches long, and if it is doubled on itself and a ring slipped over it all fluid is prevented from escaping.

At a recent meeting of the Academy, Dr. Morton related a case where he performed the supra-pubic operation in a case of enlarged prostate. I have reported a case of the same kind, done in the country. The relief was very great. It seems to me that this operation has been undeservedly neglected by surgeons.

Dr. Thomas G. Morton: The case to which Dr. Packard has referred is that of a man aged 76 years, on whom I operated three months ago. He still wears a tube with a stopper in the end of it. He is absolutely comfortable, and evacuates his bladder every five hours. He sleeps all night, opening the tube but once. His family states that he has gained seventeen pounds in weight. The

urine, which before was extremely ammoniacal and incrusted the glass tube within forty-eight hours, has become entirely clear and is without odor. No urine escapes along the tube. The operation has probably saved his life, and has made him more comfortable than an external urethrotomy would have done. The tube consists of an œsophageal tube cut into pieces. The internal extremity has a number of openings cut into it, while the external end is fitted with a glass tube in which a stopper is placed. When he desires to urinate, he simply removes the stopper. Only once has urine escaped through the urethra, and that was during violent straining with a passage, when about a teaspoonful escaped.

ORTHOPÆDIC APPARATUS.

Dr. Thomas G. Morton: I have here some photographs which I should like to exhibit. Some years ago I reported a case of total paralysis of the legs with partial paralysis of the thighs. There I turned up the legs upon the thighs and put artificial legs upon the boy. He was then able to walk with readiness, and on one occasion walked five miles. He got uneasy in regard to having his legs turned up every day, and thought that it would be better to have the legs amputated. They were amputated, and the result was fatal. Since then a case has come under my care in which the right leg is totally paralyzed from the middle of the thigh downward, the limb being excessively atrophied and eight inches shorter than the other. In that case I have done the same thing, and these photographs give the result. In many cases the moral effect of treating a case by apparatus in this way is good. I should hesitate very much before adopting any more serious treatment in the way of amputation, especially with the results which I have had by this method in the two cases mentioned. This boy walks well, without any limp, and you would not know that there was anything wrong.

OPERATION FOR TRACHEOTOMY.

Dr. Charles B. Nancrede: I had occasion a short time ago to call the attention of the Academy to the operation for opening the trachea proposed by the German surgeon Boas. My principal reason for referring to this now is to call attention to the mistake which Morell Mackenzie makes in describing this operation. He says that if, after making the incision down to the cartilage, you make an incision at the lower margin of the thyroid cartilage, you will divide the superficial and deep layer of the cervical fascia and be able to push everything downward. You can do nothing of the sort. If you make the incision at this point [indicating], you will be able to push everything out of the way. For the purpose of removing growths from the larynx this is better than any other method of operation.

The other day I opened the trachea of an adult aged 50, for the purpose of removing an intra-laryngeal growth which the laryngologists said could not be removed *per vias naturales*. I cut through the thyroid cartilage and removed the growth without difficulty. The case has since done well. I was anxious to call attention to this operation. I had done the operation before inadvertently. Dr. Lenox Hodge called my attention to it as a recognized operation. This is the first time that I have purposely carried it out. I got as low as the fourth tracheal ring, and I think that I could have gone still lower if it had been necessary.

Dr. Thomas G. Morton: I have done the operation of tracheotomy many times, but I have never had any hemorrhage that amounted to anything. I do not know that I have ever tied a vessel in any of the operations. As soon as I have got through the skin, I take my nail and the handle of a scalpel and scrape my way down until I reach the highest ring of the trachea. I then put in a tenaculum to hold it, and cut out a piece. I have not had the slightest difficulty.

Dr. Charles B. Nancrede: I have been less fortunate than Dr. Morton. In the last tracheotomy that I did at the Episcopal Hospital there was great hemorrhage. It was in a man 30 years of age. There had evidently been a subcutaneous gumma with a large cicatrix, causing great sinking in over the sternum. I incised the skin and divided the superficial fascia. I found the division between the muscles, and commenced to separate them with the director, and then the hemorrhage began. There was complete spasm of the larynx, and the man sprang up in bed. I secured a tenaculum and caught the trachea, plunged in a knife, and, fortunately, hit the trachea, and then inserted a tube. Some of these operations are very easy, but others are accompanied by severe bleeding.

LIGATION OF BRACHIAL ARTERY.

Dr. F. H. Gross: I desire to refer to a case in which I tied the brachial artery three weeks ago. The man was brought into the German Hospital without any very definite history. He had been injured in the finger, and this was followed by cellulitis of the forearm, extending beyond the elbow. The palm of the hand was immensely swollen. There were numerous gashes in the arm, as though incisions had been made. There were incisions over the radial and ulnar arteries at the wrist. There was a long cut on the inner side of the supinator longus, from which a ligature hung, the radial artery having been ligated below the supinator longus. There was a rubber band around the arm above the seat of hemorrhage. On removing the band there was a free flow of blood from the vessels. The arm was in a high degree of cellulitis, and presented some black spots, es-

pecially at the upper wound, where the radial artery had been tied. In order to check the bleeding, I tied the brachial artery just below the anterior profunda. One reason for mentioning the case is the marvellously favorable effect which this had upon the phlegmonous condition. The following day the skin was already somewhat wrinkled, and the cellulitis continued to subside below the seat of ligation; but such was not the case above the seat of ligature. There an abscess formed, and I feared that I should be obliged to ligate the subclavian. The abscess, however, found its way into the upper incision, and the patient is now doing well.

I believe that it has been proposed to tie the main artery in the treatment of cellulitis; but who proposed this I do not know.

MYXOMA REMOVED FROM AXILLARY REGION.

Dr. Charles B. Nancrede: I have here what Dr. Simes says is a genuine myxoma. It was removed from the axilla of a child 11 months old. The tumor was detected when the child was three months old. It was thought to be various things by the physician, but an exact diagnosis was not made. The case was sent to me for an opinion. It felt very much like a cyst, and there was evidence of irritation of the glands from bad vaccination. I considered it a cyst or a chronic abscess. Six weeks later it had increased three or four times in size, and it was determined to remove it. Two weeks ago, with the assistance of Drs. Simes and Rex, we partially etherized the child and removed the growth, which filled the axilla completely. It went under the clavicle and well up to the cricoid cartilage. It was with the utmost difficulty that the growth could be enucleated. The child is now well. I show the specimen chiefly because myxoma beneath the deep fascia is rare. I have not been able to find an account of a case of myxoma in the axilla of a child under a year of age, or, in fact, of the axilla at any age.

Adjourned.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held May 20, 1886, the President, A. JACOBI, M.D., in the chair.

It was announced that the Academy would shortly come in possession of five thousand dollars left it by the provisions of the will of the late Dr. E. L. Beadle, one of the founders.

Memorial remarks on the late Dr. Caspar Griswold were read by Dr. E. G. Janeway; after which the same author read a paper on

THE DIAGNOSIS OF HEART-DISEASES,

in which he gave his experience with exceptional cases observed clinically and post mortem. First, there were different causes for altered position of the heart which might give rise to difficulty in diagnosis. He would speak of one,—namely, elongation of the first part of the arch of the aorta. This was the only explanation which he could find for altered position of the heart as verified by clinical and cadaveric examination in several cases. Pushing forward and upward of the heart in spinal disease he had known to lead to an erroneous diagnosis of aneurism. The nipple was not infrequently taken as a guide to the position of the heart in man; but Dr. Janeway thought this an unreliable landmark, more so than the intercostal spaces and the centre of the sternum. Inspection and palpation were relied upon to a considerable extent as affording points in diagnosis; but the writer had often been struck with the absence of perceptible cardiac impulse in hospital inmates and also in persons in presumably good health. Sometimes, also, the cardiac impulse was not evident on palpation. This could not be taken as indicating more than a slight lack of force in action.

Some physicians were inclined to attribute the cardiac thrill to a single condition; but Dr. Janeway thought the conditions under which it was present were variable. It was generally true that the thrill accompanying aortic and pulmonary obstruction was perceptible at the base of the heart over the respective arteries, that of the pulmonary on the left, that of the aorta on the right of the sternum; but by this sign alone one would not be justified in making a diagnosis. The time of the thrill would help somewhat; but to exclude an aneurism would at times require a very careful examination. Although opposed in principle to snap diagnosis, he had not infrequently been able to predict mitral stenosis simply by palpation over the heart, and had found his prediction confirmed not only by further physical examination, but by autopsy.

Mapping out the area of the heart was, as a rule, not difficult; but Dr. Janeway had been much impressed by the devices which some physicians had thought it necessary to resort to in this procedure. A simple means would enable one to use the ordinary Camman stethoscope: namely, let the patient hold the stethoscope to his chest-wall, leaving the examiner's hands free.

Students were apt to condemn a heart over which a murmur existed, and to consider it normal when no murmur was audible, and he had known of some expert examiners being misled in the same direction. They were most likely to pronounce the heart normal when no murmur was present. Before pronouncing a heart normal, it was important to consider not only the nature of the heart-sounds, but also what effect the cause producing the murmur was having upon the heart. A difference of opinion was likely to arise when a murmur existed over the cardiac area as to its exact significance. There were other sources for murmurs heard over or near the heart which were of decided importance

to the patient so far as diagnosis was concerned, such as respiratory murmurs.

To distinguish between the murmurs produced in the aorta and at the aortic valves was not always a matter of ease. Sometimes an aneurism, a projecting thrombus on the aortic valves, or a chronic endarteritis would be found to produce either a systolic, a diastolic, or a presystolic murmur; or there might be a conjoint cause in the aorta and the valves for the murmur. The murmur of aortic regurgitation might be propagated to the apex, and if the leakage were free it might be mistaken for a mitral regurgitation or a presystolic murmur. With reference to mitral stenosis, in the majority of cases, when the valves were capable of vibrating, there existed a characteristic presystolic murmur; but at times there was no characteristic murmur of this lesion. A stenosis might exist without any distinct murmur, or with a murmur intermittently present. In a number of the cases there was a certain character of the first sound of the heart which, when taken in connection with the condition of the organ, settled the diagnosis in favor of mitral stenosis. Heart-murmurs as evidence of disease of the valves when they existed singly were at times a source of considerable trouble to the searcher for a true diagnosis; and when they increased to three, four, or perhaps five in number, there was great difficulty in diagnosis. The author pointed out the difficulty of distinguishing at times between a mitral regurgitant and a mitral presystolic murmur, of diagnosticating tricuspid regurgitation when there was mitral stenosis; whether a loud systolic murmur heard over the base of the right ventricle were due to a tricuspid regurgitation or to an aneurism of the aorta. A thrombus at the apex of the left ventricle or in the left auricle, sometimes of considerable size, was present without giving rise to a murmur. Or a bead-like vegetation might exist on the auricular aspect of the mitral valve without a murmur. The author also took up other points in diagnosis.

Dr. E. Darwin Hudson, Jr., opened the discussion, and said he would take up only a few points. The location of the apex of the heart was usually under the fifth or sixth interspace or the intervening rib. When not here, it was evidence at once in favor of cardiac dilatation or hypertrophy. But there might be a change in the position of the heart resulting in a variation from the usual position of a cardiac murmur. For instance, he had known physicians to mistake an aortic regurgitant murmur for a pulmonary regurgitant, when a search for the apex would have prevented the error. The importance of mitral murmurs, whether systolic or presystolic, could be properly appreciated only by studying the composite nature of the first sound of the heart. In many cases we could make an immediate and final diagnosis between a mitral regurgitant and a mitral obstructive murmur; but he had so often found murmurs which possessed all the characteristics of an organic murmur at his first examination, and at a subsequent examination found that they had disappeared, that he would advise postponement of a final diagnosis until a second or some future examination. At one time he doubted the existence of the presystolic murmur, but he had long since changed his opinion on this point. He was sceptical, however, as to the frequency of the occurrence of the mitral presystolic.

Rest and sedatives would often cause the disappearance of an apparently mitral systolic murmur. He did not believe the mitral systolic murmur was transmitted by the solid structures around to the back, but rather by way of the auriculo-ventricular opening, posterior auricular wall, and thence to the back.

Dr. H. N. Heineman dwelt upon the necessity for taking into consideration all the points in a given case, together with the clinical history, before arriving at a final diagnosis. Three years of observation of cases at Professor Clark's clinic led him to believe that thrill bore no relation to the intensity of a murmur, and that in itself it was of little significance. It could not be relied upon as a diagnostic sign, although it might be of aid in connection with other symptoms. He had known it to occur in aortic stenosis and be conducted to the apex, causing difficulty in diagnosis between aortic stenosis and mitral insufficiency.

Dr. A. L. Loomis had been greatly interested in the clinical and pathological experience which Dr. Janeway had related. He had given his experience upon certain points which one who studied cardiac diseases carefully would often find it difficult to decide upon. The author had first drawn our attention to cardiac displacement, and spoken of a displacement due to elongation of the aorta. Dr. Loomis once had occasion to examine a large number of healthy persons, and he came to the conclusion then that the region of the apex-beat varied in different persons more than was generally supposed. Displacement below the so-called normal point of apex-beat was most common. If now he should find the apex below its normal limit, there being the normal area of diffusion and intensity, etc., he would not for a moment suppose that it indicated cardiac disease.

The author had also called our attention to cases of feeble apex-beat in persons who had occupied the recumbent position for considerable time. When Dr. Loomis had found this condition he had questioned in his own mind whether there had not been some interference with cardiac nutrition. One who studied cardiac diseases soon came to the conclusion that it was not the murmurs nor the changes in position of the heart which were of so

much importance, but rather the integrity of the cardiac walls and of the cardiac rhythm. A mitral regurgitant murmur, for instance, might exist for years and be a matter of little importance; but when in connection with this murmur, or any other cardiac murmur, there came a change in the walls of the heart, permitting under high blood-pressure of a change in its cardiac rhythm, it was a matter of much significance.

Dr. Loomis believed that the thrill heard over the base of the heart or over the apex, as the case might be, was dependent as much upon dilatation of the cardiac cavities, combined with a general condition of anæmia, as upon valvular changes. If no cardiac murmurs were present, it was important to notice whether in connection with a thrill there was also a trembling impulse.

The diagnosis between a presystolic murmur and an aortic regurgitant was an old question. He had been taught by Dr. Camman that the murmur heard at the apex of the heart, preceding the first sound, was due to regurgitation at the aortic valves, the blood running down on the posterior wall of the heart. Soon, however, he had opportunity to make an autopsy on a patient whom he had repeatedly examined, and he found that the presystolic murmur had been caused by mitral stenosis. Since then he had not questioned the existence of the presystolic mitral murmur, the anatomical conditions which produced it, nor did he regard it as of especially serious import unless it was developed from an endocarditis. A large number of these murmurs were unquestionably congenital, and the patients got along without any apparent difficulty unless it were after over-exertion or pulmonary congestion. He thought one could distinguish these murmurs by analyzing the character of the sound.

Dr. Janeway had spoken of pulsation in the liver. Dr. Loomis had never seen expansive pulsation in the liver without pulsation in the jugular vein in the neck arising from tricuspid regurgitation.

If he would lay more importance upon one point than upon another, it was that the diagnostician should study carefully the condition of the cardiac walls and lay less stress upon cardiac murmurs. The latter might be absent or not recognized in a person who, after some sudden excitement or exertion, developed cardiac dilatation. A subsequent examination might then reveal a murmur.

Dr. Loomis asked Dr. Janeway whether he regarded ulcerative endocarditis as a primary or a secondary affection.

Dr. JANEWAY replied that there were some cases of undoubted secondary ulcerative endocarditis. Others, so far as could be determined, were primary, there being no other lesion to which it could be traced. There were other cases in which we might be left in doubt as to whether the other lesions coexistent with the ulcerative endocarditis preceded it or were secondary to it.

The PRESIDENT asked whether a murmur was to be considered as always present in ulcerative endocarditis.

Dr. JANEWAY replied that it might not be present.

The PRESIDENT said he anticipated such would be the reply, for he was quite sure he had seen a case of ulcerative endocarditis in which there was no murmur. Perhaps it was because the vegetations were so near the base of the valve that they produced no vibration.

Dr. JANEWAY remarked that he had seen many vegetations in cases in which there was no murmur, and the absence of murmur was due to cardiac weakness. As to the diagnosis of mitral stenosis, it was sometimes difficult to distinguish between this condition and simply a prolonged first sound of the heart.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held May 12, 1886, the President, JOHN A. WYETH, M.D., in the chair.

RETROPERITONEAL SARCOMA.

Dr. WALTER MENDELSON presented a retroperitoneal sarcoma, involving the kidneys and other tissues, removed from a German, aged 58 years. He had always enjoyed good health until his present illness. A sister had died of cancer. Dr. Mendelson first saw him on the 15th of February last, when he was complaining of constipation, anorexia, and general lassitude. His friends had noticed that he had been running down for three months. The urine contained a few hyaline and waxy casts. On the 15th of March the urine contained blood and blood-casts, hyaline casts, a few waxy casts, and a number of large, nucleated, highly granular cells, stained deeply with blood-coloring-matter. In the right loin was an ill-defined area of dulness, and a sense of hardness on deep palpation. The next day the patient was seen by Dr. W. H. Draper, who found the same condition of things, and also on the left side a nodular mass in about the region of the kidney. It was shaped very much like the kidney, was hard and slightly movable. The diagnosis of cancer of the kidney was made. Dr. Sands saw the patient on the 19th of March and agreed in the diagnosis. March 24 the patient passed red urine and blood-clots of great length, which Dr. Mendelson at first thought came from the ureters, but he concluded afterwards that they were formed while passing through the urethra from a mass within the bladder. At this time there was no tenesmus; but later the clots became harder and were passed with difficulty. On the 10th of April there was suppression of urine, and the patient died on the

15th, there having been passed during these five days only four ounces of urine.

The autopsy showed a large retroperitoneal sarcoma, involving both kidneys and the abdominal aorta; the intima escaped. The liver contained several small nodules. When the right kidney was cut into, a quantity of bloody urine gushed out. The ureter and pelvis of the kidney were distended with a bloody, grumous mass. The microscopical examination showed that the growth was a spindle- and round-celled sarcoma.

Dr. PRUDDEN remarked that it was often difficult to classify these retroperitoneal tumors. The arrangement of cells was often like that of carcinoma, and perhaps it would be better to classify these cases by themselves. The specimen presented by Dr. Mendelson seemed to be clearly one of sarcoma.

Dr. MENDELSON remarked that in a former specimen which he had seen the growth involved all the coats of the aorta and projected within, causing a thrombus.

PROFUSE EPISTAXIS—ACUTE DILATATION OF THE HEART.

Dr. PUTNAM JACOBI presented the heart of a child which died aged 5 years. The child's parents were very poor, and it had received but little to eat during the winter. Recently it had a very severe hemorrhage from the nose, which lasted several hours. When Dr. Jacobi saw the child, it was nearly exsanguinated; its color was that of wax. It had previously had three attacks of epistaxis; but only the first approached in severity the last. The only previous disease which might have had a causative relation to the hemorrhage, it seemed, was scarlet fever; but the heart was examined subsequently to that disease and found to be normal. When Dr. Jacobi examined the patient, the pulse was 150, the temperature 101° F. There was dilatation of the heart, and rather a loud systolic murmur, with its maximum intensity at the apex. The child did not respond to food and stimulants, but died at Dr. Jacobi's third visit. It was her intention at this visit to obtain some of the blood for examination, but the patient's condition was so low that it seemed cruel even to prick the finger.

The autopsy showed the left ventricle of the heart moderately dilated, the right somewhat dilated. The heart was extremely pale, especially over the right ventricle. The walls of the heart were streaked with yellowish-white lines. There was fatty degeneration, the degenerated fibres being intermingled with others which remained healthy. A similar change was manifest in the kidneys. There was a spot of presumable hypostatic pneumonia in one lung.

Dr. Jacobi thought it possible that the case was like those of profound malarial poisoning with progressive breaking down of the blood-protoplasm in fine granulations reported by Italian writers. The voluntary muscular fibres had not yet been examined.

Dr. MENDELSON inquired whether the arteries were abnormally small.

Dr. JACOBI said they were examined, but not with regard to size. It was probable, had they been abnormal in size, that it would have been noticed.

Dr. MENDELSON said cases had been reported in which the arteries were congenitally too small for the needs of the body, and in these cases hemorrhages were very common. This might occur even without there being anæmia, as in the case of a young man from college who died suddenly, and at the autopsy they found a hemorrhage into the cerebral ventricles. The aorta was not larger than his ring-finger, the walls of the vessels were proportionally thin, and evidently during an unusual strain had ruptured.

Dr. JACOBI thought that cases of congenitally small arteries would not be likely to manifest symptoms due to such inadequate development until towards adolescence, when the demands of the body were greatest.

ALTERATION IN BLOOD.

Dr. T. M. PRUDDEN exhibited a section of brain-tissue, for which he was indebted to Dr. Councilman, in which were seen the indeterminate bodies said to have some relation to changes taking place affecting the blood. The bodies could be distinctly seen within the blood-vessels, in the perivascular spaces, and also in the blood-corpuscles.

BRONCHIAL PHTHISIS.

Dr. J. LEWIS SMITH presented the lungs of a child which died aged 8 months, illustrating bronchial phthisis. The bronchial glands were considerably enlarged, and some were undergoing cheesy degeneration. Dr. Smith thought that, had the child lived so long, there would have been signs of miliary tuberculosis within a month or six weeks. He wished to have the specimen referred to the Committee on Microscopy, to determine the presence or absence of the bacillus tuberculosis. Dr. Smith thought bronchial phthisis was not generally as well appreciated as it should be. Some cases he believed were mistaken for tubercular meningitis: the enlarged bronchial glands, interfering by pressure with the return-circulation from the brain, gave rise to the cerebral symptoms. In a case which he saw recently there was gradually increasing drowsiness, but the temperature did not rise above 100° F., and there was not the vomiting and sighing respiration of meningitis. The autopsy revealed bronchial phthisis, the enlarged bronchial glands having caused, by pressure on the blood-vessels, cerebral œdema.

REVIEWS AND BOOK NOTICES.

A Reference Hand-Book of the Medical Sciences. Embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By various Writers. Illustrated by Chromo-Lithographs and Wood-Engravings. Edited by Albert H. Buck, M.D. Vol. II. William Wood & Co., New York, 1886. 4to, half morocco, pp. 814.

The volume before us begins with "Catarrh, Nasal," and ends with "Eye." Many of the subjects are treated by writers who are familiarly known as acknowledged authorities in special departments of medicine. Among the contributions attracting special attention are the illustrated articles on "Cerebral Cortex, Functions of," by W. B. Scott; "Cephalometry, Craniometry," by Irving C. Rosse; "Cestodes," by Charles G. Hackley; "Chest, Physical Examination of," by Lester G. Curtis; "Chorion" and "Decidua," by Charles S. Minot; "Cleft Palate," by Huntingdon Richards; "Club-Foot," by A. Sidney Roberts and Samuel Ketch; "Color-Blindness" (with colored plate), by B. Joy Jeffries; "Cornea" (colored plate), by Frank Buller; "Cranial Nerves," by Frank Baker; "Cremation," by Felix Formento; "Dactylitis Syphilitica" (colored plate), by Edward Wigglesworth; "Digestion," by Charles F. Withington; "Dislocations," by E. M. Moore; "Ear and its Disorders," by several contributors; and the "Eye and its Disorders" likewise is fully treated by different writers. We also would invite special attention to the article on "Electricity in Medicine," by Roswell Park, and the many illustrated contributions upon Materia Medica by W. P. Bolles. We would like also to mention some of the unillustrated articles, such as that on Cerebro-Spinal Meningitis, by James F. Whittaker, and those on Cholera and Diphtheria, both contributed by Harold C. Ernst, but we can do no more at present than simply to invite our readers to examine for themselves this valuable work, which is highly creditable to American medicine.

Von Ziemssen's Hand-Book of General Therapeutics. In Seven Volumes. Vol. IV. The Treatment of Disease by Climate. By Dr. Hermann Weber. General Balneotherapeutics. By Professor Otto Leichtenstern. New York, William Wood & Co., 1885.

Change of climate is one of the oldest therapeutic expedients. Hippocrates, in his treatise "De Morbis Vulgaribus," declares, "In morbis longis solum vertere conducit," and in his other works, notably in his treatise "De Aëre, Locis et Aquis," and in his "Aphorisms," he reveals the high estimation in which climatic conditions were held in his day for the relief of diseased conditions. Aretæus recommended sea-voyages and a residence at the sea-side for phthisical patients, Galen treated the same condition by mountain climate combined with a milk diet, while the elder Pliny was of the opinion (which many share at the present day) that patients would be more benefited by residing in the pine woods. Although later Roman and Arabian physicians referred occasionally to climate as an important factor in the etiology and treatment of disease, it cannot be said that scientific climatology and climato-therapeutics existed before the present century, and, according to Dr. Weber, Alexander von Humboldt was the founder of recent climatology, upon which the scientific treatment by climate is based.

This volume is one of the best of the series, and gives in moderate compass well-digested information upon two topics in which physicians possess less information than they should, and often less than they desire.

After a brief introductory chapter, chiefly historical, comes a Section upon Elements or Factors of Climate, taking up the atmosphere or air, temperature, moisture, light, and weight or pressure of the atmosphere, and influence of electrical conditions. Section II. contains a Classification of Climates into (A) Marine Climates, with (1) high, (2) medium, or (3) low degrees of humidity, and (B) Inland Climates, of (1) high altitudes and of (2) low levels. Section III. gives the directions for the Choice of a Climate for the Treatment or Prevention of Disease, concluding with Section IV. on Home Climatic Treatment.

General Balneotherapeutics is divided into three parts: (1) The Physiological and Therapeutic Action of Simple or Medicated Baths; (2) The Physiologico-Therapeutic Action of Water in its Internal Application; (3) The Pharmaco-Dynamic and Therapeutic Actions of the Most Important Groups of Mineral Wells. An appendix is added, giving directions for various medicated baths and artificial mineral-waters and baths, and it is followed by a Synopsis of the Empirical Indications of Different Drinking and Bathing Cures in Individual Diseases.

Although references are given to some of the prominent health-resorts and mineral springs in this country, it is natural that European baths and cures should be most frequently referred to. This work we hope will stimulate to increased exertions those who are engaged in the investigation of the resources in mineral springs and health-resorts in the United States.

The *Archives of Gynæcology, Obstetrics, and Pædiatrics* is published by Leonard & Co., New York. It is a bi-monthly journal, edited by the members of a Gynæcological Club: it aims to contain a complete résumé of current literature on gynæcology, obstetrics, and diseases of childhood, and is valuable to the general practitioner as well as to the specialist.

MISCELLANY.

Professor William H. Pancoast has accepted the honor of a reception and dinner which has been tendered him by a number of his friends prior to his departure for Europe on the 19th instant. The dinner will take place at 8 o'clock P.M. on July 17, at the Hotel Bellevue, Philadelphia. About one hundred covers will be laid. A number of distinguished physicians from different parts of the country are expected to be present.

At Jefferson Medical College, Drs. A. C. W. Beecher, Orville Horwitz, and Thomas Bell have been appointed to take charge of the anatomical department, and will divide between them the duties of the position of the Demonstrator of Anatomy, which was rendered vacant by the election of Dr. Forbes to the Chair of Anatomy in the Faculty.

The New Orleans Auxiliary Sanitary Association is doing good work in flushing the streets and gutters with river-water, which, besides carrying away filth, reduces temperature. In consequence of the sanitary precautions of this Association, the health of the city is steadily rising in the scale, and the death-rate has been correspondingly reduced.

The "Ideal" electric lamp, as manufactured by Daniel & Stewart, Philadelphia, furnishes a light which is sufficiently brilliant and steady to adapt it to microscopic or other work where a superior illumination is required.

NOTES AND QUERIES.

OBITUARY.

Henry G. Landis, M D., late Professor of Obstetrics and Diseases of Women and Children in the Starling Medical College, Columbus, Ohio, died, after a protracted illness, in Philadelphia, on Saturday, May 22, at the age of thirty-eight. He was born in Philadelphia, was graduated from the Jefferson Medical College in 1870, and, after practising in Niles, Ohio, for several years, settled in Columbus in 1877. He was a member of the Pathological Society of Philadelphia, of the Trumbull (Ohio) County Medical Association (its President in 1876), and of the Columbus Academy of Medicine. He was the author of several valuable obstetrical monographs, and an obstetrician of great promise. His death was due to Addison's disease and pulmonary tuberculosis.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM MAY 23, 1886, *TO JUNE* 5, 1886.

Colonel J. H. Baxter, Chief Medical Purveyor.—Ordered to proceed to New York City on public business, and, on the completion thereof, to return to his station. S. O. 128, A. G. O., June 3, 1886.

Lieutenant-Colonel Charles Page, Surgeon.—Granted leave of absence for one month, with permission to apply for ten days' extension. S. O. 55, Department of Missouri June 1, 1886.

Lieutenant-Colonel Andrew K. Smith, Surgeon; Major Alfred A. Woodhull, Surgeon; and Captain James P. Kimball, Surgeon.—Detailed as board to assemble at United States Military Academy, West Point, New York, on June 1, 1886, to examine into the physical qualifications of members of the graduating class and the candidates for admission to the Academy. S. O. 119, May 21, 1886.

Major Albert Hartsuff, Surgeon.—Detailed as member of a board appointed to meet at United States Military Academy, West Point, New York, on June 1 and August 25, 1886, to examine into the physical qualifications of members of the graduating class and the candidates for admission to the Academy. S. O. 121, A. G. O., May 25, 1886.

Paragraph 7, S. O. 120, A. G. O., May 24, revokes so much of paragraph 12, S. O. 119, A G. O., May 21, as details Surgeon Alfred A. Woodhull as member of medical examining board to meet at West Point, New York, June 1, 1886.

Captain C. K. Winne, Assistant-Surgeon.— Granted leave of absence for twenty days on surgeon's certificate of disability. S. O. 34, Department of California, May 17, 1886.

Captain Henry S. Kilbourne, Assistant-Surgeon.—Assigned to duty at Vancouver Barracks, Washington Territory. S. O. 80, Department of the Columbia, May 15, 1886.

Captain G. W. Adair, Assistant-Surgeon.—Granted leave of absence for two months, to take effect when his services can be spared. S. O. 128, A. G. O., June 3, 1886.

Captain E. F. Gardner, Assistant-Surgeon.—Ordered for duty at Madison Barracks, New York. S. O. 49, Division of the Atlantic, June 1, 1886.

Captain A. H. Appel, Assistant-Surgeon.—Ordered for duty at Fort Reno, Indian Territory. S. O. 52, Department of Missouri, May 24, 1886.

Captain R. B. Benham, Assistant-Surgeon.—Ordered for temporary duty at Fort Omaha, Nebraska. S. O. 56, . epartment of the Platte, May 24, 1886.

First-Lieutenant R. W. Johnson, Assistant-Surgeon.—Ordered for duty at Fort Adams, Rhode Island. S. O. 45, Division of the Atlantic, May 25, 1886.

First-Lieutenant R. L. Robertson, Assistant-Surgeon.—Relieved from temporary duty at Fort Snelling, Minnesota, and ordered to Fort Keogh, Montana Territory.

First-Lieutenant John L. Philips, Assistant-Surgeon.—Relieved from duty at Fort Keogh, Montana Territory, and ordered to Fort Sisseton, Dakota Territory.
S. O. 45, Department of Dakota, May 24, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM MAY 23, 1886, *TO JUNE* 5, 1886.

Passed Assistant-Surgeon S. H. Dickson.—Detached from the Naval Academy and to the "Constellation."

Surgeon W. J. Simon.—Detached from the Naval Academy and to the "Constellation."

Surgeon B. H. Kidder.—Detached from the "Powhatan" and to the "Tennessee."

Surgeon A. C. Rhoades.—Detached from the "Tennessee," proceed home, and wait orders.

Assistant-Surgeon F. J. B. Cordeiro.—Detached from the "Powhatan," proceed home, and wait orders.

Surgeon J. H. Clark.—Ordered for examination preliminary to promotion.

Surgeon Joseph Hugg.—Detached from the "Minnesota" and granted sick-leave.

Surgeon H. N. Beaumont.—Ordered to the Receiving-Ship "Minnesota."

Surgeon H. L. Law.—Detached from the "Wabash" and granted sick-leave.

Assistant-Surgeon Charles P. Henry.—Ordered to the Receiving-Ship "New Hampshire."

Surgeon Howard Smith.—Detached from the "Nipsic" and placed on waiting orders.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JUNE 26, 1886.

ORIGINAL COMMUNICATIONS.

ON WHOLESOME WATER FOR CITIES AND TOWNS.

Abstract of a Paper read before the Sanitary Conference held under the Auspices of the State Board of Health of Pennsylvania in Philadelphia, May 13, 1886,

BY CHARLES SMART, M.D.,
Major and Surgeon, U.S.A.

SPRING-WATER, uncontaminated by man, is the purest and most wholesome water for domestic use. Rain-water, by percolating through the porous stratum of the earth's crust, loses most of the impurities which it took from the air, and, in turn, in passing through the soil, becomes more or less charged with inorganic gases and mineral salts; but these, so long as they do not interfere with potability and economic uses, are not only harmless, but endue the water with a wholesome sapidity.

The early settler went to the spring for his water or tapped the water-bearing stratum at his own threshold; but this latter mode of obtaining a supply came in time to be attended with the danger of a contaminated inflow. The foully-saturated soil of our growing settlements at the present time renders it imperative that we either go to the springs, like the early settler, or have the spring-water brought to us. In choosing the latter method, a certain deterioration in the quality of the supply is accepted in part-payment for the convenience of tapping the springs on every floor of our houses. The waters of many springs have to be impounded, or those of innumerable springs have to be pumped up from the flowing river. In either case the percolated waters are mixed with a surface-inflow the purity of which depends on the character of the surface which conveys the rain-fall. A strict surveillance over the limited water-shed of impounded springs may protect the supply from all impurities save those precipitated from the atmosphere and the vegetable and mineral matters washed from the surface of the soil. When the water is taken lower down, from the river-current, the impurity is increased, because the larger area of the water-shed cannot be so well protected from the harmful effects of its settlement. Besides vegetable decay and fine mineral particles, a certain quantity of the wastes of human life and human industries will contaminate the supply. Vegetable matter, washed down from the uplands or drained into the current from stagnant ponds, swamps, and marshy bottoms, and animal matters contributed by the sewage of the upper settlements, are the dangerous substances that enter the water-supply derived from the river-current.

The chemist can determine with accuracy the elements of the organic matters in a water; he can in many cases state whether they existed mainly in the form of vegetable or of animal matters, and in certain cases he can point out the existence of recent sewage; but he cannot state whether the organic matter discovered is of a harmless or a deleterious character. Ordinary or non-specific vegetable matters are apparently harmless in water, unless present in such quantity or in such a state of fermentative change as will give an observable taint to the supply. So with ordinary or non-specific animal matters, among which are included those known to exist in what has been called *healthy* sewage. But certain specific organic matters sometimes present are known to be exceedingly unwholesome. These are well-recognized facts. Unfortunately, the chemical processes fail to differentiate between the ordinary and the specific organic matters. The dictum of the analyst is based upon the assumption that where there is a large impurity the likelihood of a specific accompaniment is greater than where there is a small impurity. His results may authorize a verdict of probable unwholesomeness; but in no instance in which the sense of smell or taste is unaffected can he be more explicit on this side of the question, and in no instance whatever can he give an assurance of wholesomeness.

On the other hand, when the laboratory results are compared with the data furnished by a thorough investigation into the sanitary aspects of the case, a new light is thrown upon them by which much of their ambiguity is removed. But by sanitary investigation is not meant a mere survey and enumeration of the sources of polluted inflow, but an inquiry into all the points which bear upon the propagation of disease by the water-supply, and especially of those diseases which the collected experience of the medical profession has in-

dicated as connected with a polluted water. The indigenous diseases thus associated are not numerous. They consist of fevers that are more or less continued and of fevers that are essentially paroxysmal in type,—of typhoid fever and of malarial fevers: the one intimately connected with an *animal* impurity in the water, and the other as intimately connected with a *vegetable* impurity.

The incompetency of the chemical processes to pronounce on the unwholesomeness of a water is more frequently illustrated when animal matter is in question. Waters comparatively free from vegetable impurities have never been accused of malarial possibilities, while waters largely thus contaminated have often been thus charged and adjudged guilty. But a water which has been the apparent propagator of typhoid fever may or may not be found foul on analysis; and waters manifestly foul from sewage-inflow have been used for long periods without producing an injurious effect. The recent records of medicine are full of instances in which a well with sewer or cesspool connections has been used for years with no harmful results so long as the sewage-inflow was small and of an ordinary or non-specific character; but as soon as a specific infection was added the well has become a centre of typhoid propagation. Whether the specific infection is always derived from the intestines of an antecedent case of the disease or is generated in an impure soil under certain conditions is immaterial to the present argument. It is sufficient to know that the infection is present in the typhoid excreta, and that, when any of this infected matter percolates into the well, fresh cases of typhoid fever are developed in susceptible persons who make use of its waters for drinking purposes. Usually in such wells the sewage-inflow is so great that the chemical results show an undesirable contamination; but in many instances the inflow is so small or the purifying influence of the percolation through the soil is so great that the infected water may give a fairly good showing on its analytical record. In other words, the quantity of infected sewage necessary to the spread of typhoid by a well-water is so small as to evade detection by chemical methods, or the influence of a filtration which effects the destruction of ordinary organic matter leaves the specific poison unaffected and in full potency. So well are these facts recognized and acknowledged that the health officers of many cities having a trustworthy general supply have not hesitated to close up the wells within their jurisdiction.

The influence of filtration is very powerful in the destruction of ordinary organic matter. It has been said at the beginning of this paper that the purest natural water is that which has been filtered through a clean soil. The organic matter is reduced to an inorganic condition. It becomes split up into transitional and unstable forms, the changes terminating in the rapid nitrification of a produced ammonia. A water thus purified may yield but little free or albuminoid ammonia on analysis, and even the nitrates that remain to indicate the former sewage-pollution may constitute an apparently trifling quantity; but this water, pure according to the analytical record, may be a dangerous propagator of enteric fever if the sewage that has been destroyed was an infected sewage. The purifying influence does not affect the fever-poison, nor does the filtration remove it.

Now, if the infection of an infected sewage be not separable by filtration, and can withstand the powerful agencies that in the process of filtration destroy the accompanying sewage, will the infection of an infected sewage poured into the current of a river be destroyed by a flow of so many hours in that current? Will that which cannot be separated by filtration be removed by subsidence in a flowing stream which is often manifestly turbid? Will that which is not destroyed by the most powerful of natural purifying influences be rendered inert by the weaker influences operating on the flowing water? If not, river-waters that have been polluted with an infected sewage will communicate typhoid fever as surely as well-waters that have been similarly contaminated,—and wholly irrespective of the results of chemical analysis.

Chemists, looking only at the laboratory results, have announced that the running water becomes purified as it flows, and that at a certain distance below the point of sewage-inflow it becomes again as free from organic matter as it was before the introduction of the contamination. A distinguished authority in this country has spoken with emphasis on this point. "It

should be distinctly stated," he has said, "that there is no foundation in fact for the oft-repeated statement that water once polluted by sewage can never again become safe for drinking purposes. Wherever the pollution and subsequent self-purification of a flowing stream has been patiently investigated, the chemical testimony as to the reality of this self-purification has been convincingly demonstrated." But the conclusions of the English Rivers-Pollution Commission are opposed to this claim. "It will be safe to infer," it is stated, "that there is no river in the United Kingdom long enough to effect the destruction of sewage by oxidation." Nevertheless, self-purification to a certain extent may be accepted as a fact. Dilution, sedimentation, aëration, and nitrification go on in the current, and all tend to improve the analytical record of the water; but the chemical testimony which convincingly demonstrates the reality of this self-purification does not demonstrate the safety of the water for drinking purposes. Dr. Buchanan, of England, summing up the results of a recent investigation, stated that we have no evidence in the case of an unknown water that it is safe organically, although the chemical testimony may place it on the list of waters of extraordinary organic purity; and practically the same conclusion was reached by the investigation conducted in this country by Professor Mallet, of the University of Virginia.

To demonstrate that a water which has been polluted by an infected sewage may again become safe for drinking purposes, it is needful to show that typhoid fever is not a prevailing disease among the people who use it. There are many difficulties in the way of effecting this demonstration, and chief among these appears to be the well-attested fact that typhoid fever does prevail among them, and in many recorded instances has been traced to the water as its source. Witness the epidemic of last year at Plymouth, or the Lauson epidemic, in which the water underwent a thorough natural filtration before propagating the disease. There is no difficulty in showing that typhoid fever prevails among people who use an infected water; but it is often extremely difficult to prove the charge against the water. We may appeal to statistics; but our statistical records are not always trustworthy. The typhoid influence of a general water-supply may be modified by that of a supplemental supply from vitiated wells. Water-carriage is not the only method by which typhoid is propagated. Not long ago sewer-air was regarded as an ever-present cause in our cities; and there seems no doubt that infected exhalations contribute to the prevalence of the disease. Secondary foci from primary cases may give rise by mediate contagion to local epidemics which obscure the influence of a weakly-infected water-supply. Nevertheless, there are some points other than those already mentioned in the natural history of the typhoid poison that countenance the belief in its propagation by contaminated river-water. Typhoid fever differs from small-pox, measles, and scarlet fever in having no cyclical prevalence. It is not a rare clinical study and sanitary anxiety at one time and a prevailing epidemic at another. Where many people are aggregated, its causes are always present and always in operation. But it has a well-developed seasonal tide in its prevalence, which spreads its maximum in this country over the latter half of the third and the first part of the last quarter of the year. Dr. Baker, of Michigan, has shown that in his State this increased prevalence follows a low stage of water in the wells, when sewage-inflow is less diluted than at other seasons. But the same period of prevalence holds good in the cities which have a general water-supply, corresponding with the time when the sewage-inflow into the streams is in like manner undiluted.

Again, in looking at the typhoid statistics of certain cities in which the complicating elements appear to be at a minimum, we cannot fail to be struck by the fact that the prevalence of typhoid fever is in a measure proportioned to the sewage-pollution of the water-supply. It is to be noted in this connection that although a given sewage may not be an infected sewage, it must be regarded as possessing the elements of danger in view of the general distribution of the fever in rural as well as in urban districts.

Brooklyn, Long Island, has a water-supply perhaps less contaminated with sewage than that of any large city in this country. It has also a smaller rate of mortality from typhoid. Last year twenty-three persons died of this fever in every one hundred thousand of the population.

This is not an accidentally small rate due to the absence of an epidemic during that particular year, for the average annual rate of the last ten years was only a little over fifteen per one hundred thousand. The city of New York has a water-supply that is guarded with much care from sewage-inflow; but it is derived from a much more extensive area than the Brooklyn water. The typhoid death-rate last year was twenty-one, and the average annual rate for the past ten years twenty-six. A constant supervision is exercised over the water-supply of the four millions of people aggregated in the city of London, England; and the mortality-rate of the continued fevers, including typhus, amounted only to seventeen during the past year, while the average annual rate of the past ten years was but little over twenty-eight in the one hundred thousand. These figures may be regarded as a standard of comparison for the rates of other cities.

The water-supply of Boston has a careful superintendence, but it is known to have a certain amount of sewage-inflow. Correspondingly, we find that the typhoid mortality-rates are higher than those already instanced. The rate for 1885 was thirty-eight, and the average of the past ten years forty-three. Cincinnati, supplied by the Ohio River, gives higher typhoid rates: forty-four for the past year, and sixty-three as the average of the past ten years. Philadelphia, supplied chiefly by the Schuylkill, had a typhoid-rate of sixty-four in 1885, and an average rate of sixty-six for the past ten years. These rates for Philadelphia mean that during the past ten years there died of typhoid fever four thousand four hundred persons who would not have died of that disease had the Brooklyn rates prevailed; and that over fifty thousand people suffered from a dangerous and debilitating illness who would have escaped attack had Brooklyn causes operated on them instead of those of Philadelphia.

If the views that have been submitted are correct, we would infer the presence of an infected sewage in the Schuylkill water or the presence in Philadelphia of typhoid causes that do not exist in Brooklyn, New York, or London. According to the records of the Water Department of the city, a notable sewage-inflow has existed since 1860, when complaints were made of the foul taste and odor of the water, and when certain sewers were specially mentioned as occasioning the impurity. A recent report says, "The Schuylkill above Fairmount dam is the natural sewer, first and last, for a population of three hundred and fifty thousand, largely engaged in manufacturing; and, whatever may be the varying judgments of physicists as to the power of a running stream to purge itself of foreign contamination, it is very certain that the river itself has from time to time furnished the most convincing evidence of its inability to digest or dispose of the extraneous and injurious matters discharged into it." With regard to other assumed causes of typhoid, it does not appear that Philadelphia is specially their habitat. The aggregation of susceptible individuals on a given area undoubtedly facilitates the spread of this disease; but the area of Philadelphia is less crowded than that of most cities of its size,—certainly less so than that of New York or London. The progress of sewer-construction has kept pace with the growth of the city. It has been demonstrated by many statistical comparisons that the introduction of a system of sewerage has invariably lessened the death-rate of a city, and particularly the rate occasioned by the zymotic diseases; yet Philadelphia, so far as regards typhoid fever, retains or even exceeds the rates that prevail in certain unsewered cities.

The following table shows in parallel columns the annual death-rate from typhoid fever per one hundred thousand of the population in the sewered city of Philadelphia and in the unsewered cities of Baltimore and New Orleans. The rates for each of the past twenty years are given, yielding an average for Philadelphia, 61, slightly lower than that for Baltimore, 65.4, and considerably larger than that for New Orleans, 33. When we restrict our inquiry to the rates of the past ten years, it is found that Philadelphia has a higher mortality than either of the two other cities, 66.1 as compared with 52.5 and 24.6. The soil of Baltimore is honeycombed with pits and vaults of deposit; and although the city has had a general water-supply for many years, the well-water supply has been used to a considerable extent. I have but little personal knowledge of the character of these well-waters. In 1879 I examined one of them situated in the enclosure of the Johns

Hopkins University. It was rather a rank ammoniacal solution than a potable water. The use of such waters may be held in view in regarding the rate of the first of these periods of ten years. In 1880 an additional supply was brought into the city from the Gunpowder River, and perhaps the consequent disuse of contaminated wells may account for the lessened frequency of typhoid of late years. At the present time there are sixty-two public wells in use, thirteen of which are artesian. All the others have been condemned and closed. There are, however, many private pumps which are not under the control of the Health Commissioner. These, with a trifling amount of sewage-inflow into the waters of Jones's Falls and the Gunpowder River before they reach the storage-lakes, may be held responsible for the typhoid prevalence at the present time. The sanitary condition of New Orleans will be referred to hereafter.

Annual Death-Rates from Typhoid Fever per One Hundred Thousand of the Population in

	Philadelphia.	Baltimore.	New Orleans.
1866	60	80	65
1867	57	94	66
1868	60	65	31
1869	56	80	34
1870	61	99	42
1871	45	73	37
1872	52	65	34
1873	50	82	29
1874	62	83	47
1875	55	62	28
Annual rate for the decade	55.8	78.3	41.3
1876	98	60	26
1877	68	75	33
1878	50	55	21
1879	41	51	15
1880	59	59	24
1881	74	58	30
1882	73	47	33
1883	63	36	23
1884	71	42	25
1885	64	42	16
Annual rate for the decade	66.1	52.5	24.6
Annual rate for past twenty years	61.0	65.4	33.0

In a valuable article, read last year at the Ypsilanti Sanitary Convention, Dr. Erwin P. Smith has tabulated many of the statistics bearing on the lessened mortality from typhoid coincident with the introduction of a general water-supply and a system of sewerage. These are usually contemporaneous improvements, but the removal of the filth by water-carriage constitutes so notable a change in the sanitation of the municipality that the influence of the water-supply is generally regarded only in so far as it has contributed to that end. Nevertheless, it is a question if the water-supply *per se* be not a more important factor in the subsequent decrease of sickness than the system of sewerage. On its introduction the water is usually of excellent quality. It takes the place of dangerous waters from the subsoil of the city, and contributes proportionately to the typhoid diminution. But, later, as the water-supply becomes defiled by the growth of settlements on the area of its derivation and along its course, it may become as much charged with dangerous matters as the well-waters which it supplanted.

To what extent the Schuylkill water-supply is responsible for the typhoid rates of Philadelphia is not for me to indicate. Due consideration must be given to all the other influences that are known to favor the propagation of the disease. One of these, the subsoil water, still operates to a considerable extent, although the Board of Health has taken action against it and directed the closure of the wells. Dr. Leffmann, in a recent paper, suggested that the irregularity of the distribution of the deaths from typhoid throughout the city is opposed to the idea of typhoid propagation by the Schuylkill supply; but local epidemics originating in infected wells may account for this irregularity without excluding the possibility of a generally diffused but less marked prevalence. It does not appear that in New York City the disease is confined to any particular locality; its distribution is general; and the maps of the health-officer of Washington City show an indiscriminate scattering of the deaths over the populated areas.

One other argument in favor of the connection between a sewage-polluted water and the prevalence of typhoid may be derived from the recorded statistics of mortality. If it were possible to build a city with all the insanitary conditions, whatever they may be, that underlie the surface of Philadelphia, and to supply that city with water certainly free from sewage, a death-rate from typhoid in this supposed city equalling that of Philadelphia would throw the causation of the disease upon other agencies than the water-supply; and, correspondingly, a comparative freedom from typhoid in the supposed city would strengthen the argument in favor of a water-propagation for the disease in Philadelphia. Such a city cannot be built to order, but, fortunately, New Orleans presents us with many of the essentials of an

experiment of this kind. New Orleans has no sewers: all its liquid filth flows sluggishly in open channels by the sidewalks; its more solid refuse is collected in boxes in closets and out-houses, whence it is carried to the current of the Mississippi; the subsoil-water is so impregnated with drainage from the surface as to be unfit for potable use; and the exhalations from the sluggish drains, the closets, and out-houses not unfrequently taint the air in many parts of the city. Here are conditions as to subsoil and surface which would be regarded as accounting sufficiently for an extensive prevalence of typhoid, were it found to be present. Certainly they must be considered as more conducive to the spread of zymotic disease than the corresponding conditions of subsoil and surface in Philadelphia, for the general results of modern sanitation show a sewered city to be a healthier abode than one that is not sewered. But this city of New Orleans has a water-supply that is free from sewage-inflow. The Mississippi water is pumped up mainly for use in flushing the streets and drains, while the domestic supply consists of rain-water collected and stored in cypress-wood cisterns which are raised above the suspicion of a contamination by sewage; and the typhoid mortality, 16 during the past year, and 25.6 as the average of the past ten years, is as low as the standard rates furnished by the cities of New York and London.

May we conclude from these arguments that the inflow of sewage into a stream is fraught with too many dangerous associations in connection with typhoid fever to warrant the use of its water as a general supply, no matter how convincing may be the chemical testimony as to its organic purity? Whatever other modes of typhoid propagation may be allowed, that from the sewers or vaults, which are the "continuation of the diseased intestines," is incontestable. The influences operating on the flowing water do not destroy the essence of disease, nor, as shown by the history of every infected well, does the process of filtration effect the separation of the poison. The advocates of sewage-irrigation become enthusiastic over the clearness and purity of the water that flows from their under-drains, and suggest that the general use of this system for the disposal of sewage would reclaim our polluted streams and permit them to be again used with safety for household purposes. But the essence of sewage-irrigation is filtration, and filtration through a notoriously polluted soil. The unwholesomeness of a well-water in a soil saturated with sewage has been so often illustrated that we may well be excused for showing some hesitancy in accepting the effluent water of sewage-irrigation as a general household supply. The adoption of this system of irrigation would undoubtedly prevent our streams from becoming open sewers, but here the advantage ceases. So long as we know that not sewage, but a sewage-polluted mountain-stream used for irrigating purposes in one valley occasioned a general outbreak of virulent typhoid among the inhabitants of another valley who had used the clear water of the effluent, we must acknowledge that filtration cannot be trusted to render an infected water safe. Hence, if the conclusion above suggested be admitted, the only method by which typhoid communicated by a general water-supply may be avoided is to procure a supply of water that is free from sewage, and preserve it in its condition of natural purity.

The vegetable matters in a water appear to be dangerous in proportion as the water exhibits the usual characteristics of marsh or swamp waters. The organic matter in these is comparatively large in quantity, and contains a larger proportion of carbon combined with its nitrogen than is found in animal matter. This is shown in the laboratory by direct analysis or indirectly by the large quantity of oxygen that is required to oxidize a matter yielding a relatively small quantity of albuminoid ammonia. The microscopic life in these waters is of an elementary form, consisting largely of sluggish protoplasmic masses. Remittent fevers have been frequently associated with the use of such waters. But it does not follow that these vegetable matters in themselves constitute the essence of malarial disease. The accepted theory is that organic matter during its decomposition, under certain conditions in the soil, evolves a noxious miasm. This miasm escapes into the atmosphere, and its subtile influence is felt at considerable distances from the place of exhalation. It is known to be condensed and concentrated by fogs and falling moisture, and it seems probable that even the rain-fall is not free from a taint of this impurity among the other impurities which it washes from the atmos-

phere. But the chief source of a malarial contamination in our surface-waters is their contact with an exhaling soil. Hence, although a malarious water may exist without an associated charge of vegetable organic matter, it usually contains a very notable quantity; and this quantity may be regarded as an index of the malarial possibilities of the water.

The propagation of malarial diseases by means of the drinking-water has of late years been generally accepted by the profession. Proof was difficult to obtain because of the long-continued and unquestioned acceptance of the doctrine of an aerial miasm. When the requisite spot of malarious soil was not present to account by its exhalations for some obscure or anomalous case, the existence of such a spot was assumed, for it seemed more plausible to suppose that the malarious locality had escaped recognition than that the time-honored doctrine was inadequate to explain all the cases. But when attention was directed to these obscure cases they were found to be very numerous. They were common in all our Western territories on elevated grounds, where there was apparently no source of malarial exhalations, and these cases were always of a serious character,—remittent fevers rather than simple agues. They were common also in our large cities, where drainage and cellarage gave a dry subsoil and the surface was more or less sealed by street-paving: and these cases also were of a remitting or subcontinued form. They were common in certain districts of the country in the winter season, when the theory of a malarial miasm exhaled into the atmosphere and inhaled into the lungs was inconsistent with their existence, inasmuch as the frosts of the season or a thick covering of snow should have imprisoned all such exhalations: and these cases also were found to be severe rather than mild. But in all these instances of serious malarial disease without malarious soils to account for them the drinking-water used was not above suspicion, and in many the prevalence and aggravated character of the sickness were proportioned to the amount of vegetable impurity in the water. On the assumption that the water was impregnated with the malarial essence, these obscure cases ceased to be obscure. But this is not an assumption, for there is a ground-work of observations to support it as solid as that which sustains the theory of aerial transmission. Many years ago a well-known medical investigator reported the occurrence of pestilent malarial fevers among troops on a transport that had been supplied with marsh-water. The evidence was so strongly guarded at every point that no doubt could be entertained as to the causation of the fever among these men. Since then dangerous fevers have frequently been referred, on more or less satisfactory testimony, to malarious surface-waters; and it is notable that the disease when introduced in this way is always of a more aggravated type than when caused solely by exhalations,—the poisonous water appearing in a general way to be a more concentrated and deadly agent than the poisonous air. Moreover, and this is of grand importance from a preventive point of view, the prevalence of these fevers has decreased with an improvement in the water-supply. The remittents of our Western territories have declined in frequency and virulence since the country became settled and a better water-supply was found than that of the ponds, ditches, and tanks used by the early overland traveller and settler. The evidence from India is very explicit on a similar decline of the pestilential fevers. Recent reports from some of the most unhealthy districts show an extraordinary change in the insalubrity of the country coincident with the procurement of a supply of drinking-water from deep and carefully-protected wells. Along the base of the Himalaya Mountains is a broad strip of marsh- and forest-land called the Terai, which for many years has been uninhabitable owing to the prevalence of malarial fevers. Continued efforts were made by the government to reclaim and populate this tract, but with only partial success. The strife between enterprise and malaria was carried on, but at the expense of a fearful sacrifice of human life, until recently, when the construction of deep masonry wells has permitted positions to be held which a long experience had pronounced uninhabitable. The natives have for ages believed in the transmission of the fever by means of the surface-water, and this belief has at last been accepted in its entirety by the governnent, and, as reported, with beneficent practical results. Villages that were formerly unhealthy have ceased to be so, and the change has been sharply defined and contemporaneous with

the construction of masonry wells. These experiences fully support the evidence brought by Professor Parkes from the Crimea, to the effect that the villagers there who drank surface-water had fever all the year round, while those who drank well-water had fever only in the summer and autumn.

All the observations and arguments hitherto advanced in favor of the transmission of malarial disease to the human system by means of the water-supply have equal force on behalf of filtering the surface-waters that are to be used for drinking purposes. In no instance has malarial disease been traced to the use of a well-water untainted by a direct inflow from the surface. Dangerous malarious waters from marshes and other soils rich in vegetable decay leave their noxious constituents behind them in percolating through the soil, and appear in the well as pure and non-malarious waters. Filtration is therefore capable of removing from a surface-water the essence of the remittent fevers that may be present in it.

This brief review of the pathogenic relations of the animal and vegetable matters that find their way into our running streams, under the conditions of the present time, teaches us how a certain proportion of the sickness and mortality now prevalent in our growing settlements may be avoided. Spring-water issuing from an unsullied soil is destitute of morbific qualities. Nature is bountiful, and provides for all the needs of creation in the cyclical repetition of her processes. The waters rise from their great storehouse under the influence of the solar heat. They pervade the atmosphere, and, massing from time to time, are precipitated, carrying with them the accumulated impurities that would otherwise soon render the aerial ocean turbid and unfit for the support of life such as ours. They flush the surface of the earth, freshen its verdure, and carry into the rivers all the detritus of animal and vegetable life. The river-water is nature's sewage, and its destination is the ocean. The rain-water becomes impure in carrying out the purpose of its fall in the economy of nature, but all its impurities are removed from that part of it which penetrates the soil to feed the springs. The experience of all the ages testifies to the purity and desirability of the spring-supply. When the Israelites were famishing in the Wilderness they obtained manna from heaven, but their water-supply came from the rocks of Massah and Meribah when struck by the rod of Moses.

Under the conditions of our modern civilization it seems impossible to bring the spring-water in its pristine purity to our homes; but it is only a question of money and an intelligent and watchful superintendence to have a water which will be its equal in wholesomeness. Animal matter, with its typhoid possibilities, must be excluded by the selection of a suitable source, the area of which must be afterwards protected to the full. But the most careful surveillance will fail to exclude the malarial possibilities associated with the vegetable matter of an otherwise healthful surface. To remove these, nature's process of filtration must be imitated. Thus only will a water be obtained free from the danger of typhoid fever on the one hand, and of malarial disease on the other,—a pure, clear, and wholesome supply, which, by preserving the community from unnecessary sickness, will in a short time amply repay the expenditure involved in its introduction.

REPORT ON THE PROGRESS OF OTOLOGY.

BY CHARLES H. BURNETT, M.D.,
Professor of Otology, Philadelphia Polyclinic.

THE MEMBRANA TYMPANI: PHYSIOLOGY AND PATHOLOGY.

KAUFMANN has published three cases in which the respiratory movements of the membrana tympani were plainly visible (*Wiener Med. Presse*, p. 183, 1885). The cases were observed in Zaufol's clinic in Prague. Some experiments with Marey's instrument yielded a number of interesting tracings. In all three cases the act of inspiration was accompanied by a negative excursion of the membrane, that of expiration by a positive movement. The tubes were pervious in all, and in none was the excursion of the membrane accompanied by a simultaneous movement of the velum palati. According to Kieselbach (*Monatsschr. f. Ohrenh.*, No. 1, 1885), pressure made by means of Siegel's otoscope upon a very movable membrane and hammer produces a state of affairs similar to that produced by partial press-

ure on a membrane stretched loosely over the opening of an air-tight vessel: while the portion pressed upon sinks in, the remainder of the membrane becomes prominent. This protrusion is best seen in atrophic portions or cicatrices, these rising above the remainder of the membrane. (*Archives of Otology*, vol. xv. p. 93.)

Keller records a case of an engineer, 25 years old (*Monatsschr. f. Ohrenh.*, No. 1, 1885), who was hurled several feet and rendered unconscious for ten minutes by the force of an explosion of gas while he was examining a boiler. A few days later there was noticed a profuse discharge from the left ear, accompanied by deafness and great dizziness. Both membranes were ruptured in their anterior halves. The deafness gradually increased.

Miot (*Revue mensuelle de Laryngol.*, No. 4, 1885) gives a clinical history of a lady affected with chronic inflammation of the left middle ear, from whose right ear, a normal one, a physician endeavored to remove a plug of cerumen by forcible syringing with warm water. This was followed immediately by loss of consciousness, lasting five minutes, by permanent tinnitus and persistent pain. A purulent discharge set in from this ear in the course of a week, and the hearing in the left ear grew worse. This was followed by vertigo, disturbances of muscular co-ordination, insomnia, faulty nutrition, and suicidal impulses. Miot ascribes these symptoms to a violent hyperæmia of the labyrinth complicated by a slight sanguineous apoplexy. (*Archives of Otology*, vol. xv. p. 94.)

THE USE OF COCAINE IN THE NOSE AND EAR.

Zaufal's experience (*Prager Med. Wochenschr.*, No. 7, 1885) leads to the confirmation of the good effects of cocaine in reflex neurosis of nasal origin. The use of cotton plugs soaked in a five-per-cent. solution of cocaine in a severe case of acute coryza produced marked relief, permitting freer nasal respiration, and checked the nasal secretion. The course of another case of coryza was entirely checked by one application of a five-per-cent. solution. The use of cocaine in a third case provoked a severe attack of coryza.

The anæsthetic effect of cocaine upon the external meatus is by no means as certain and striking as when used upon the nasal or pharyngeal mucous membrane. It must be borne in mind, however, that the effect of cocaine is modified by the fact that the sensibility of the membrane varies materially in different individuals, both physiologically and in pathological conditions. This author has observed a decided analgesic action of the drug in only five cases of acute inflammation of the middle ear. The use of cocaine will prove beneficial in controlling pain in acute myringitis and acute otitis media. The application of a twenty-per-cent. solution in furunculosis of the external meatus will reduce the sensibility sufficiently to permit pressure on the outer ear, traction on the auricle, and mastication without pain. (*Archives of Otology*, vol. xv. pp. 97, 98.)

Kirchner, by brushing the membrane with a ten-per-cent. solution of cocaine, reduced its sensibility sufficiently to make a free incision in a case of purulent otitis media without producing pain. (*Deutsche Med. Wochenschr.*, No. 4, 1885.) In similar applications it rendered paracentesis in thickening of the membrana, sections of the anterior and posterior folds, tenotomy of the tensor tympani, and division of the handle of the hammer near the short process almost painless; while in other cases it seemed to have no such effect. The variable action of cocaine induces Kirchner to advocate the use of a twenty-per-cent. solution in operations on the drum-membrane. (*Archives of Otology*, vol. xv. p. 97.)

Baratoux has used cocaine with very good results in the removal of nasal and aural polypi, in galvano-caustic applications to the tubes and to the nares, and in opening abscesses in the external auditory meatus. Paracentesis of the drum-membrane was painlessly performed a few minutes after introducing a five-per-cent. or a ten-per-cent. solution into the drum-cavity, and at the same time instilling some into the external meatus. When used in ten-per-cent. or twenty-per-cent. solutions in the nares in acute coryza and otitis, it may impair the senses of taste, smell, and hearing. It is said that a one-per-cent. solution will diminish the secretion in nasal catarrh and catarrhs of the middle ear. (*Archives of Otology*, vol. xv. p. 98.)

Stein considers cocaine a valuable anæsthetic in facilitating catheterization, in allaying pain in acute otitis media, and in

the removal of aural polypi. He also claims to have observed its good effect in diminishing suppuration in uncomplicated cases of middle-ear inflammation. (*Archives of Otology*, vol. xv. p. 98.)

Lange's experience induces him to discourage too sanguine expectations regarding cocaine as a local anæsthetic. In looking over the literature of this subject, the great discrepancy in the strength of the solutions used by European and American observers is striking. This is attributed to a difference in the qualities of the drug, to the age of the watery solution, to the manner of its application, to the part of the body to which it is applied, and to the individual susceptibility to the action of the drug. He has derived some success from a ten-per-cent. solution, and he expresses a hope that more extended observations establishing indications for its use and proper mode of application will enhance its possibilities. A reduction in the price of the drug is a determining factor. (*Archives of Otology*, vol. xv. p. 98.)

TUBERCULOSIS OF THE MIDDLE EAR.

The investigations of Habermann (*Praeger Zeitschrift für Heilkunde*, Bd. vi.) upon tuberculous infection of the middle ear are reviewed by Kretschmann in the *Archiv f. Ohrenh.*, Bd. xxiii. p. 157. The occurrence of tubercular processes in the organ of hearing, long since considered highly probable, could be proved only by the discovery of the tubercle-bacillus in the tissues of the ear. The bacillus had been found in the secretions from the ear by many, but Habermann found bacilli also in the aural tissues.

In twenty-five subjects examined post mortem, it was found five times. In all five of these pus was found in the antrum and in the tympanic cavity. In four cases there was a perforation of the membrana tympani. In every instance the pus contained more or less bacilli. The mucous membrane of the drum-cavity was swollen in nearly all portions, and at places it was deprived of its epithelium. It also showed small-celled infiltration, with disseminated aggregations of giant-cells and tubercle-bacilli in varying number. In some cases undoubted tubercle was found devoid of bacilli. Similar conditions were found in the mucous membrane of the antrum and of the tympanic end of the Eustachian tube. The bone was eroded at some points, especially in the region of the promontory. In one case the inner ear was affected. Granulations were here found in the lowest whorl of the cochlea, which contained giant-cells and bacilli. From this point the morbid process passed to the acoustic nerve. Aggregations of tubercle-bacilli were also found in the descending part of the facial nerve, which had been paralyzed during life.

Upon the strength of his investigations, Habermann concludes that the process begins in the mucous membrane and thence passes to the deeper tissues. For the occurrence of tubercle in the middle ear three explanations are given.

1. Bacilli may gain access to the middle ear from the air through perforations in the membrana tympani. But this would be admissible as explanation in cases of perforation of the membrane; yet in one case of those reported there was no perforation.

2. The author admits the possibility of infection by the circulation, but considers this mode very doubtful.

3. The most probable explanation, according to the author, is what may be termed the mechanical mode,—viz., by the entrance of tubercular matter through the Eustachian tubes, usually widened in tubercular subjects, just as intestinal tubercle is caused by swallowing tuberculous sputa.

THROMBOSIS OF THE LEFT TRANSVERSE SINUS, CONSEQUENT UPON CHRONIC PURULENT OTORRHŒA.

A case is related by E. Bull (*Archiv f. Ohrenheilk.*, Bd. xxiii. p. 161) of a young man, 16 years old, otherwise healthy, who had suffered four or five years from a discharge from his left ear, when he was suddenly attacked with intense frontal headache. In the course of two weeks there was developed a condition of irritability to all external disturbances, delirium at times, thirst, anorexia, difficult urination, diarrhœa, with rigors. At the time of his admission to the hospital the patient complained of headache, and there was an extremely offensive, purulent discharge from the left ear. His skin was dry and hot, and his face slightly cyanotic; pulse 120. His pupils were moderately dilated and sluggish. There were also signs of meningitic tache. His tongue was dry and encrusted with sordes; respirations 48, labored, and he coughed now and

then. He lay upon his right side, with his legs drawn up, and his eyes closed. The carotids beat violently, and there were strong muscular contractions, intense sensitiveness of the skin, and occasional trembling of the entire body. The urine was normal, and the belly indolent. No change of any moment occurred in these symptoms, and in three days he died, the diagnosis being meningitis.

The post-mortem examination revealed a thrombosis of the left lateral sinus, and of the jugular vein as far as the clavicle, and the lumina of both vessels filled with discolored pus. The meninges were softened and dotted with elevated ecchymoses, especially on the base of the cerebral lobes. There was a watery fluid in the cranial fundus.

The tegmen tympani was softened and perforated with minute openings, and the overlying dura mater, with the corresponding part of the cortex of the left temporal lobe, was discolored. There was pneumothorax on the left side, from perforation at the upper lobe of the lung, and copious metastatic aggregations in both lungs. The bronchial glands and the spleen were softened.

EAR-DISEASES IN LEUKÆMIA.

The observations of Politzer and Godstein upon this subject are further confirmed by those of Blau, of a case in his own practice (*Archiv f. Ohrenh.*, Bd. xxiii. p. 169). A young man, 36 years old, who had been suffering a little while from leukæmia, developed aural symptoms as follows. At first there was vertigo, which became intense in the course of three days, being attended at last with nausea, vomiting, ringing and pounding noises in the ears, and deafness. Under ice-treatment the vertigo disappeared in six days, but the gait remained unsteady and subjective noises were still present. In the course of some weeks a greater deafness was noted, and there was also pain in the left ear.

Dr. Blau now saw the patient for the first time. He found absolute deafness in the left ear, and on the right side catarrh of the middle ear. The air-douche and alterative drugs improved the hearing somewhat on the right side; but the duration of this improvement was short, because of an attack of labyrinth-disease, which in the course of a few hours entirely destroyed the hearing in the right ear. Nevertheless, there ensued gradually some improvement in the hearing in the right ear, until an attack of subacute catarrh with perforation of the membrana tympani, which healed, but was followed in a month by a similar attack, in which the perforation also healed quickly. With improvement of the general health there ensued a partial restoration of the hearing on the right side, so that moderately loud speech could be heard close to the ear.

CAUSES OF DEAF-MUTISM.

In considering the causes of deaf-mutism, Boucheron (*Revue mensuelle de Laryngologie*, No. 4, 1885) shows that naso-pharyngeal diseases form an important factor in the pathogeny of infantile deafness followed by mutism. The deaf-dumbness developing suddenly after birth is characterized either by the presence of meningitic or epileptiform symptoms, or by an absence of convulsive symptoms, and can therefore be divided into two categories. In both instances the deafness arises from an anæsthesia of the nerve-filaments, the result of an increased intra-labyrinthine pressure. Subsequently a destruction of the acoustic filaments takes place. Boucheron suggests for it the name of "deafness due to otopiesis,"—*i.e.*, to pressure within the internal ear. Experimental studies made upon dogs have caused the author to regard occlusion of the sieve-like arrangement within the aqueductus vestibuli, the safety-valve which normally prevents the occurrence of intra-aural pressure, as the most important cause of the latter. Three forms are spoken of by Boucheron,—viz., "otopiesis pseudo-meningitic," "otopiesis pseudo-epileptic," and a simple form of otopiesis. The first form is subdivisible into the inflammatory and the non-inflammatory. Examination of the ear with the mirror generally shows a normal appearance of the external ear and membrana tympani, or the latter retracted simply, the color remaining normal. An exacerbation of the naso-pharyngeal catarrh which is almost always present will, however, often produce a sudden reddening of the membrane, with marked hyperæmia of the handle of the hammer.

Extensive destruction of the membrana tympani and the ossicles, and caries or necrosis of the temporal bone, are comparatively rarely seen in deaf-mutes. Naso-pharyngeal affections and catarrhs of the Eustachian

tubes and middle ears are common among deaf-mutes, and they have great effect upon the chief condition by their frequent relapses. The author very justly declines to regard the deafness occurring in the offspring of consanguineous marriages as a result of race-degeneration, but rather as an additional circumstance of an inherited catarrhal predisposition,—a view entirely in harmony with the experience of your reporter. He also believes true congenital deafness to be a much greater rarity than heretofore supposed.

The treatment should, "first of all, have in view the prevention of the formation of a vacuum in the tympanic cavity; secondly, the restoration of the mobility of the drum-membrane and ossicles, especially the stapes; thirdly, measures to overcome the inherited catarrhal tendency and the tubal catarrh; fourthly, stimulation of the anæsthetic labyrinthine nerves; fifthly, education of the hearing sense after it has been sufficiently restored to perceive speech; sixthly, instruction by artificial methods should no improvement take place or power of hearing prove insufficient." (*Archives of Otology*, vol. xv. p. 96.)

A CASE OF ENORMOUSLY-ENLARGED HEART WITH PATENT FORAMEN OVALE, ILLUSTRATING THE LAW OF COMPENSATION.

BY R. LEAMAN, M.D.,

Demonstrator of Clinical Medicine in the Jefferson Medical College.

SIR CHARLES BELL first called attention to the fact that during every violent act of expiration, whether in weeping, coughing, laughing, or sneezing, the eyeball is firmly compressed by the fibres of the orbicularis muscle, thus defending the vascular system of the interior of the eye from the retrograde impulse communicated to the blood in the veins at the time. For, when the chest contracts in expiration, the blood necessarily dams up in the veins of the neck and head. Were the eye not properly compressed at this time, thus offering a resistance to the shock, irreparable injury might be inflicted upon the delicate textures of its interior.

Darwin noticed the same compensating process in a young orang and chimpanzee to whom he gave snuff. Among these physiological compensations none are more striking and remarkable than those among the special senses. Let the sense of sight be destroyed, and how marvellously the other senses struggle to overcome this unwonted deficiency! A most marked acuteness soon becomes manifest in the sense of hearing, of the tactile perceptions and judgments, and of the muscular sense. The blind have almost universally fine musical tastes. They are also able to follow certain pursuits and occupations. They are able to construct beautiful specimens of beadwork, intermingling at the same time beads of various colors so that artificial figures are produced, and they are enabled to do this because these beads of different colors possess different minute points of prominence not distinguished by the uncultivated finger, yet sufficiently distinct to be recognized by them and thus classified.

There is a blind organist in one of the prominent churches of our city who as a musician has few equals, and who as he feels over the numerous stops of the large instrument upon which he plays illustrates most exquisitely the law of which we speak. If there be not a muscular sense in the economy compensating in some measure for the loss of sight, there is something so akin to it that to speak of anything else would be to claim a difference without making a distinction. Unerringly, as though guided by the most perfect sight, this individual will draw upon the correct stop at the proper time, whilst, with the other hand upon the key, he still continues the melody of the piece he is playing. Something outside of what are usually regarded as the organs of special sense must tell him of his position in space and cause him mentally to see his position in space in relation to the instrument upon which he plays. Long practice has so perfected his muscular sense that unconsciously and unerringly his mind appreciates the precise amount of muscular effort required to execute a certain movement. Through a somewhat similar process it is supposed that the deaf are enabled to appreciate rhythm and tone.

We know that beyond the sphere of intellection there exists in all parts of the body, the lowest as well as the highest, a so-called sympathy,—a sympathy which leads to compensative actions, sometimes beneficial, sometimes deleterious, and which moves in such a self-directed manner

as seems to rival consciousness itself. How remarkable the constancy with which the body, under varying conditions and climates, retains an almost equable temperature! Again, diseased states continually offer a fertile field for the study of this law of compensation.

It is said that when Edmunds Crisp first announced before the Pathological Society of London the fact that fatty degeneration of the heart was "a preservative lesion," his voice was silenced by bursts of derisive laughter. The truth of this assertion was, however, soon accepted by the Society, after having followed the process of all reforms in thought,—namely, first ridicule, then discussion, then adoption.

The fact was soon recognized that, if a heart acting with the force of youth propel blood into degenerated arteries, fatal consequences will most promptly follow.

Likewise in failing heart, the bronchorrhœas, and self-instituted diarrhœas, are but natural efforts for relief, and must not be too hastily interfered with.

On the other hand, the general thickening of the walls of the smaller arteries which is so frequently associated with the atrophic form of chronic Bright's disease, induces that hypertrophy of the left ventricle, which is compensative at first, but later often gives a sudden termination by causing the rupture of some blood-vessel. Compensative action here induces a lesion which is not a preservative one, but one non-preservative in its results.

Some weeks ago I made an autopsy upon the body of a man and found the following conditions. A heart weighing thirty-three ounces, with incomplete closure of the foramen ovale, atheromatous thickening upon the aortic valves, and dilated ventricles. Liver was a typical specimen of red atrophy; kidneys somewhat large, but otherwise normal; spleen slightly enlarged; large serous effusions were present in abdomen and thorax. An examination of the brain was refused. This individual died early last November. His illness dated back only to the beginning of June of the same year. His disease started with symptoms referable to the chest, severe cough, dyspnœa, wasting, and emaciation. Soon, however, œdema of the lower extremities and ascites developed. He was tapped several times, but the fluid rapidly reaccumulated. He ate fairly well, but nevertheless wasted in flesh. Increasing dyspnœa and persistent dropsy were always the prominent symptoms, death occurring finally from exhaustion.

The physical signs noticed before death were: area of the heart's dulness much increased; at the same time a systolic murmur was well heard within the tricuspid area, also a slight murmur at the aortic orifice.

Now, the remarkable feature of this case is that, despite such conditions existing, up to the time of his last illness he remained in comparatively good health. His mother stated that he was a "blue baby," remaining so for about two weeks; that during childhood and adult life his fingerends and lips were at times bluish in color, but accompanied by no unpleasant subjective symptoms other than some shortness of breath on exertion. Aside from the diseases of childhood and three attacks of malaria, he never had any recognized acute disease. In fact, he had much enjoyed life, and was looked upon by his family and friends as a perfectly healthy man, without at the same time being remarkable for either strength or vigor. How wonderful as well as inexplicable must have been the compensations going on in this man's economy during a life of thirty-eight years' duration!

With this incomplete closure of the foramen ovale, it is certain that blood properly oxygenated could never at any time have perfectly nourished the tissues of this individual. We no doubt find in this a partial and probable cause for the early atheroma. No clue of any kind as to a specific taint could be found in this individual; the post-mortem showed no change in the kidney-structure: thus eliminating the two most fertile causes of early atheroma. The heart itself must have played an important *rôle* in the compensations of this individual. What of quality was lacking in his blood must be made up in quantity: the heart must do more work. The immense hypertrophy in this case, we think, was most probably induced by the abnormal arterial tension which we infer must ever have existed here, and for the following reasons.

It is known that when the venous character of the blood is increased there is an augmentation in the action of the general vaso-motor centre, which of course leads

to a general constriction of the smaller arteries. Therefore the constant venous character of the blood in this case constantly increased arterial tension, which, while it indirectly helps to augment the force of the heart's beat, is at the same time a direct obstacle to the heart's emptying itself of its contents. Hypertrophy, in our opinion, occurred here from the same condition of things—although with a different causation, yet for the same reason—that produces hypertrophy in sclerosis of the kidney.

The increased resistance in front and the augmented supply from behind, especially on exertion, would both concur in bringing about the great distention of cavities which was also present in this specimen, especially of the right ventricle. For the distention was such here as to prevent perfect coaptation of the valves, permitting leakage, and thus accounting for the murmur which was heard in the tricuspid area.

Many cases of interesting compensative action might be cited from the experience of others; some other cases of interest might be cited from our own experience; but a case where the organic lesions are so evident, yet the subjective and objective symptoms of disease remain latent for so great a length of time, must, we conceive, be exceptionally rare. For it was only when compensation failed entirely of accomplishment that the greatness of the possibilities of change which lie hidden in the body manifested themselves, and then only at the end of the life of one whose previous existence had been comparatively free from all disease.

1033 Vine Street.

QUININE IN THE TREATMENT OF WHOOPING-COUGH.

BY W. THORNTON PARKER, M.D.,

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A COMMUNICATION which I lately read in one of our journals concerning the treatment of whooping-cough with quinine in *large* doses has suggested to me that my own experience with this treatment for the past six years may be worth recording. I am the more inclined to do this since noticing that in the *British Medical Journal* of February 6 the question has been again raised as to what *is* the best treatment for cases of whooping-cough.

During the past six years I have treated upwards of one hundred cases of this disease, and the principal remedy has been sulphate of quinine in solution. With very few exceptions, this treatment has proved perfectly satisfactory. Only in cases where the hygienic surroundings have not been good, or where the remedy was not faithfully or regularly employed, or where unusually obstinate symptoms prevailed, has this excellent remedy failed to relieve, if not actually to cure. The paroxysms diminish in frequency, and the little patient shows unmistakable signs of improvement as early as the second day. With regard to Dr. Sauerhering's treatment with powders of sulphate of quinine, I have found that method less desirable, and have used it only a few times, trusting entirely to solution of sulphate of quinine varying in strength according to the age of the patient and the severity of the disease.

The employment of the solution affects at once the coughing, and the vomiting is not severe enough to occasion any considerable alarm. A certain amount of nausea, sufficient to disengage the mucous secretions, is of course desirable. Even if this treatment should be found disappointing as a *specific*, it is certainly useful in that it places the patient at once under the most favorable circumstances for a recovery, removing or relieving many of the painful and prominent sources of the disease.

Under this method of treatment complications are guarded against, and the patient's general condition is vastly superior to that of children treated with such remedies as belladonna, for instance, or other well-known depressants, and cough-syrups. The treatment with sulphate of quinine is a rational treatment. The treatment with cough-mixtures is often only a miserable attempt at palliation.

The favorable statistics of Dr. Sauerhering will be found greatly increased by Dr. Dawson's method, and a perusal of the latter's little pamphlet* on the subject will explain the *modus operandi*, so that any one can employ the treatment with a reasonable hope of success.

Dr. Dawson introduced this treatment from Germany, and first used it in the wards of the Hospital for Children in New

* Treatment of Whooping-Cough by Small and Repeated Doses of Sulphate of Quinine.

York City, then under his care. He met with great success. In 1880 I employed this treatment in many cases in private practice. I was so much pleased with its workings, and the almost immediate relief afforded, that I have used it and recommended it ever since. The treatment which I follow is to expose the patient as much as possible to the open air, and, if practicable, at our mountain or ocean resorts, paying particular attention to food and clothing and general hygienic conditions. Every two hours I give a teaspoonful of a solution of sulphate of quinine four, six, eight, or even ten grains to the ounce. This remedy does not disappoint in many cases in controlling the disease, and, if properly used, and with perseverance, in actually curing it, or at least shortening its course very decidedly. It seems to act as a sedative in the inflamed mucous membrane, and has also the valuable properties of a tonic. Unlike many of the other remedies which are so unsuccessfully exhibited in this disease, it has absolutely no injurious effects. The little patients begin to improve very shortly after the first two or three doses. I am fully convinced that a trial should always be made of the solution of sulphate of quinine in the strength and in the doses indicated, according to the age of the patient and the severity of the case; and after a few faithful experiments in this direction I believe that no one will be able to say with truth that "the course of the disease could not be controlled by treatment."

NEWPORT, RHODE ISLAND, April, 1886.

KOLA.

BY N. HUDSON, M.D.,
Medical Inspector, U.S. Navy.

THE attention which has been drawn by Dr. Gihon, in an article recently published,* to the merits of kola, and the interest taken by the profession in new remedies which may possibly prove to be of signal value, induce me to report the following case, in which the results have been so striking as to encourage further and more definite trials of this remarkable agent.

The patient, a lady of 36, had suffered during childhood from rheumatism. Up to a recent period, however, she had been in good health and able to lead a busy, active life. Eighteen months since, she was attacked with severe endocarditis, from which she recovered slowly, and with a damage to the mitral valves (insufficiency). The action of the heart was feeble and irregular, and there was a good deal of dyspnœa, faintness, and fatigue upon even slight exertion. She had always been subject to occasional headaches, and these now became periodic and severe, occurring at first at intervals of four or five weeks, and lasting two days. Latterly they had increased in frequency and intensity, coming on about twice a month, each attack causing three days of suffering so severe as to fill the patient's mind with constant dread of a recurrence. The discovery of a ratio of urea much below that of normal urine, with the existence of an occasional granular cast, established the conviction that the headaches were uræmic in character.

About three months since, she commenced the use of the kola-paste, taking about ten grammes once or twice daily, in hot milk, prepared in the same way as chocolate. During the first nine weeks of its use there was no recurrence of headache. Then there was a comparatively mild attack, which may fairly be attributed to a suspension of the use of the kola in consequence of the marked improvement. The general condition has materially improved, the heart's action is much more regular, and the attacks of dyspnœa and faintness have nearly disappeared. The most characteristic effect seems to have been an immediate relief of the sense of fatigue, a sense of *bien-être* and cheerfulness to which the patient had been long a stranger. The employment of the kola seemed to be satisfying to the appetite, for, whenever taken, it appeared to serve as a substitute for the next following meal. But the nutritive processes were not impaired: on the contrary, the bodily weight increased from ninety-eight to one hundred and five pounds. No marked change in the character of the urine has been observed. The quantity voided has somewhat increased, but the total amount of urea excreted remains at about ten or twelve grammes daily.

As far as the experience in this single case goes, it would appear that kola may be a valuable therapeutic agent. The con-

* See page 540, *ante*.

siderable percentage of caffeine which it is said to contain would theoretically make it useful as a heart-tonic. But caffeine had been tried in this case without any marked results, and the same experience had been had with convallaria. Digitalis had been the only agent which was found to be of service, but its effects were only temporary and palliative, not being sustained even when given for long periods combined with iron. The improvement which was established with the employment of the kola was marked and immediate, and the gain in the well-being and comfort of the patient has been most gratifying.

It may be proper to add that we owe the introduction of this article to Messrs. I. Christy & Co., 155 Fenchurch Street, London, and that the American depot is with Lloyd Brothers, Cincinnati.

WASHINGTON, D.C.

NOTES OF HOSPITAL PRACTICE.

ST. MARY'S HOSPITAL.

SERVICE OF J. H. GROVE, A.M., M.D.,

Surgeon to the Hospital.

AN UNUSUAL CASE OF LITHOTOMY.

WILLIAM M., aged 41, was admitted to St. Mary's Hospital March 30, 1886, suffering with retention of urine of about twenty hours' duration. He gave the following history. While in the army about twenty years ago he contracted gonorrhœa, which in time was followed by stricture of the urethra. About twelve years ago a physician attempted to relieve the stricture. Urinary infiltration and extensive sloughing of the perineum followed. Since that time the patient's urine has dribbled away through several perineal fistulas of capillary fineness. He occasionally suffered with retention for a few hours' duration, which, however, always yielded to warm baths and warm drinks.

Examination at the hospital revealed distended bladder reaching half-way to the umbilicus. A No. 16 catheter passed into the urethra about two and a half inches, and a filiform bougie about an inch more. The perineum was scarred, and composed chiefly of cicatricial tissue. No opening could be seen, but numerous small points were scattered about the perineum, appearing like recently-closed mouths of fistulas. Selecting what appeared to be the largest, I broke through the thin skin with a probe, and succeeded by a tortuous path in finding an opening into the bladder. A grooved director was now passed alongside the probe; the probe was then removed, allowing the urine to dribble slowly away, which relieved the patient. Subsequently the grooved director was passed into the bladder when required for the same purpose. On the following day, when I passed the director, it impinged upon a calculus which seemed to be quite two inches in diameter. Although the patient had suffered from obscure pains, with other symptoms which might have been referred to calculus as the cause, its presence had never been suspected. A fine, flexible catheter was next passed; but it soon choked up in consequence of the condition of the urine, which contained much pus, and was dark and ammoniacal. For this appropriate treatment was instituted.

On the first day of April he had two chills and considerable fever, with diarrhœa at night, from all of which he was relieved by the following morning.

By repeatedly pressing against the wall of the fistula with the back of the grooved director, the opening was gradually enlarged, so that on April 3 a silver female catheter was introduced; after which the bladder was washed out twice daily with a solution of borate of sodium. By April 6 his condition had greatly improved: the urine was nearly normal, though still containing some pus. He now passed his urine continuously through the female catheter, to which was attached rubber tubing which conveyed the urine into a receptacle alongside the bed. The opening remained patulous, so that he removed and replaced the catheter at will.

On the 17th of April, assisted by the hospital staff, I removed the calculus. The patient being etherized and placed in the lithotomy position, the fistulous opening being precisely in the line of the raphé and about a half-inch above the rectum, a grooved director used as a staff was passed into the bladder through the fistula and held by an assistant. An incision was made to the left from the fistula and slightly downward to a point at which the incision for the lateral operation usually

terminates. Another incision was then made from the fistula upward, in the line of the raphé, as far as it could be safely carried; both incisions at the fistula were carried down to the bladder; with a blunt-pointed bistoury, following the groove of the director, the opening in the bladder was sufficiently enlarged. The stone was then seized with forceps and promptly removed. It measured two and a half by one and a half inches in its diameters, and weighed one ounce and three-quarters. One artery required a ligature. The incised tissues were largely cicatricial, and the oozing quite free, which was not checked by the application of a saturated solution of alum, but was immediately arrested by a light touch of Monsel's solution. The subsequent treatment was in all respects the same as is usual after ordinary lithotomy. The patient recovered promptly, without an unfavorable symptom. The task of overcoming the very close and rigid strictures and restoring the calibre of the urethra was left for a subsequent operation.

TRANSLATIONS.

THE EVOLUTION OF THE MICROSPORON FURFURANS CONSTITUTING A PARASITE OF TUBERCULOSIS.—MM. Duguet and Héricourt read a paper at a recent meeting of the Academy of Medicine on "The Evolution of the Microsporon Furfurans constituting a Parasite of Tuberculosis." The authors in two cases of tuberculosis were unable to detect either Koch's bacillus or the zoöglœa of Malassez and Vignal, but found voluminous spores. The patients, besides being tuberculous, were affected with pityriasis versicolor. MM. Duguet and Héricourt conceived the probability of a pseudo-tuberculosis, microsporic in character and of pityriasic origin. Artificial cultivations were made, and with them inoculations which reproduced in animals the same parasitic affection, also granular lesions. In the cultivation-fluids there are two strata, an upper one containing bacilli analogous to Koch's bacillus and a considerable quantity of spores and filaments of mycelium; the latter were found when the cultivation-fluid was heated to 40° Centigrade. As the mycelium grew mature, they broke up into granulations: these granulations, when exposed to the air, developed into bacilli. Those which when in the form of spores contract and become granulations, when in contact with the air reproduce mycelium and spores, which multiply by budding.

The investigators believe in the microsporic nature of tuberculosis, and think it possible that the facts they enumerate will throw light on a great many points of bacteriology now obscure, and also furnish the reason why bacilli are not found in tuberculous viscera when they are present in sputa. MM. Malassez and Vignal inoculated zoöglœic masses and produced bacillary tuberculosis. MM. Duguet and Héricourt consider that all bacillary affections ought to be studied afresh and other methods adopted; also that the result of their researches indicates modifications concerning the therapeutics and prophylaxis of tuberculosis. It is possible that pityriasis versicolor may be the starting-point of a visceral tuberculosis. The susceptibility of the microsporon to the influence of sulphur indicates the advisability of treating with sulphur such pulmonary affections as cannot be distinctly diagnosticated. The arrested development of bacilli in acid media may possibly explain why bacilli are not found in the lungs of arthritic patients nor in their sputa. MM. Duguet and Héricourt terminate their communication by stating that pityriasis versicolor ought not to be rejected as a cause, but should be carefully sought for, and, if found, treated with energy.

THE RESPIRATORY CENTRES OF THE SPINAL CORD.—Since Legallois' works, and especially those of Flourens, nearly all physiologists (notwithstanding the objections brought forward by Brown-Séquard) have admitted the existence of a respiratory centre in the medulla oblongata. Consequently, the respiratory movements are arrested when the cord is cut between the atlas and the axis. Recent researches have shown that the cord, though severed from the medulla oblongata, can under certain conditions functionate as a respiratory centre.

Rokitansky (*Wiener Med. Jahrschr.*, 1874) demonstrated this fact by cutting the cord in young rabbits between the first two cervical vertebræ. After they had been poisoned with strychnine, during the convulsions it was found that some respiratory movements took place. The most

complete researches of this order are those made by Langendorff (*Arch. f. Physiol.*, 1886).

M. E. Wertheimer has recently made a communication to the Paris Biological Society, in which he states that in a number of experiments made on adult dogs of all ages, sometimes with strychnine, sometimes without, he obtained the same results as Langendorff, and observed respiratory movements. After the spinal cord had been cut in the cervical region, these phenomena occurred in fully-developed animals without using strychnine. It must be borne in mind that severing the cord not only cuts off the centre above the point of section, but for a certain time renders inert all the centres situated below it. But this result of the operation is less evident and more transitory in newly-born animals, especially in young cats. In them respiratory movements return soon after they have been thus operated on; but even in them excitability of the cord does not last long. It must be stimulated, as Langendorff did, by giving a weak dose of strychnine. In order to obtain in adult animals more striking results, an interval of time should be allowed to elapse sufficient to enable the momentary nervous exhaustion to wear off, and no strychnine need be given.

M. Wertheimer severed the spinal cord of an adult dog at eleven o'clock in the morning. Artificial respiration was carried on during some hours afterwards. The animal was carefully enveloped in cotton-wool and kept warm. The experiment was made at five o'clock P.M., and it was observed that general reflex action had returned in the limbs. Artificial respiration was suspended. After two minutes, a few feeble respiratory movements were registered by Marey's register: they became deeper and more frequent when five minutes had elapsed. There were about fifteen in thirty minutes. They then became slower. Artificial respiration succeeded in maintaining them for a few minutes only.

The Favus of Fowls identical with the Favus of Human Subjects.—The works of Gerlach, Miller, and Leisering made known in 1880 a dermatomycosis which has been generally considered as a favus; but the identity of the parasite with the *Achorion* was based on a morphological resemblance. The affection was not recognized in France. It was confounded with the itch due to sarcoptes. Recently, M. Mégnin has considered the fungus that produces favus in the fowl to be of an order closely resembling *Achorion Schoenleinii* and *Oïdium albicans*. He names it *Epidermophyton gallinæ*. This fungus was named by Revolta *Aspergillus microsporon flavescens gallinæ*. M. Neumann, in a recent communication to the Paris Biological Society, stated that he believes dermatomycosis of the head and neck of fowls is due to the Achorion Schoenleinii. It is thoroughly demonstrated that the Achorion Schoenleinii can produce favus in rats, mice, cats, dogs, and rabbits. Gerlach tried unsuccessfully to transmit favus of fowls to domestic animals. Schütz more recently failed in the same attempt. M. Neumann has been more fortunate. He inoculated a young dog with fowl favus and one with favus of the human subject: in both animals the affection presented the same clinical features. Both were quickly cured without treatment, as generally happens with animals in this affection. The same experiment was repeated on two rabbits, with the same results.

Loss of Patellar Tendon Reflex without Disease of Spinal Cord or Nerves.—At a recent meeting of the Paris Biological Society, M. Déjerine read notes on a case of suppression of reflex action of the patella, with the cord remaining intact; also the posterior roots. It is well known that in a normal condition absence of reflex action in the patella very rarely happens, but is important as a symptom of sclerosis of the posterior columns at its onset. Nevertheless, it may be met with independently of any alteration of the spinal cord and the posterior roots. M. Déjerine has observed the following instance. The patient was tuberculous, reflex action in the patella was absent in both knees; he was in M. Déjerine's wards during ten months and it was not observed. There was no motor nor sensory disturbance. At the necropsy lesions characteristic of pulmonary tuberculosis were very evident. The cord and its membranes, and the anterior and posterior roots, appeared normal to the naked eye. Microscopic examination of the posterior roots in the lumbar region proved them to be normal.

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EDITORIAL.

IS THOUGHT A FUNCTION OF MATTER?

WITHIN a few years a great change has taken place in our ideas of the constitution and nature of matter, almost, indeed, amounting to a complete revolution. Matter is no longer regarded as an inert substance, incapable of spontaneous change, and occupying exclusively a definite portion of space: essentially considered, it has neither length, breadth, nor thickness, and cannot be felt or handled. Molecules and atoms are not even regarded as ultimate forms of matter, since they are separated by a medium which is capable of propagating force,—this medium being, therefore, matter of a more refined character than the supposed elementary atoms themselves. The New Chemistry presents these constituent particles of material objects as endowed with ceaseless activity, moving with the velocity of a cannon-ball within ranges which have been closely estimated, constantly clashing with one another, yet never coming in actual contact, each atom or molecule being surrounded by an impassable area of repulsion, known as its dynasphere.

Our views of its relations to force have also been greatly modified. The forces of nature are now considered as merely matter in motion; but the speculations of science have gone even further. Mr. Benjamin Howard, in an ingenious and highly-interesting paper read some years ago before a London society, puts the relations of matter in this shape: "We pass from solid matters, such as the metals, to the liquids; from the liquids to the gases; from the gases to radiant matter; from radiant matter to the forces of nature,—gravitation, magnetism, light; from force to sensation; from sensation to thought, idea, purpose! Here, too, as with animal and vegetable life, we may well believe that there is no break of continuity; and here, also, it may be well to direct for the time our attention to intermediate forms, forms of which we can say neither 'These are material' nor 'These are spiritual.'" *

Huxley, in one of his Lay Sermons, has boldly asserted that "thought is a function of matter." This brings us face to face with a problem which, even though unsolvable, is of such profound significance, of such paramount importance, as to demand our earnest consideration. As the expression of an individual opinion it would have little weight; but the case is different when this is published as an accepted truth of modern science by one who claims to have authority, one who speaks not as a scribe, but who adds weight to his utterances by giving them the unusual and formal title of "Sermons."

Can matter think? If so, then it must feel, since thought and feeling are acknowledged to be inseparable by no less an authority than Herbert Spencer. If sentient and intelligent, universal matter is no more and no less than a manifestation of the Universal Mind, in which man is immersed just as a plant is surrounded by the medium from which it draws its life. Nay, more: the particles which compose his corporeal frame are also parts of Infinite Intelligence, which fill their appointed places and pursue their appointed tasks in accordance with the laws of nature, in which the poet sees the thoughts of God. Science, then, may yet come to admonish him, in the words of Bailey,—

> "Let each man think himself an act of God,
> His mind a thought, his life a breath of God;
> And let each try, by great thoughts and good deeds,
> To show the most of heaven he hath in him."

* Quoted by the anonymous author of "Can Matter Think? A Problem in Psychics." The Biogen Series, No. 4. Boston, Estes & Lauriat, 1886.

But the question, Is thought a function of matter? remains a mere speculation. It is true that our brains are built up of particles of matter which are not only constantly in motion, but are also constantly changing. That which survives the processes of waste and repair must surely be something different from matter. Consciousness, individuality, memory,—these cannot find their coefficients in the mere waste of brain-substance!

The priest of science has elsewhere declared (Lay Sermons, No. 12) that "Living bodies may be regarded as nothing but extremely complex bundles of forces held in a mass of matter, as the complex forces of a magnet are held in steel by its coercive force." This view seems crude, and as a definition fails in the first essential, since it conveys no exact meaning. We cannot attach much weight to a mere permission to hold an opinion, unless the terms are defined, the reasons given, and the demonstration made that such opinion is the actual truth of science. What are forces? what is matter? and what do we know with regard to the relationship existing between steel and magnetism? If we do not know, and if science has no voice to answer these preliminary questions, on what ground can it attempt to declare what life is? Certainly the sentence quoted has apparently the form and force of a definition, ambiguous though it may be, given by modern science of the greatest problem of biology. But is it not idle to attempt to declare thought to be a function of matter until we are prepared to tell in what thought and matter essentially consist? When science can penetrate the veil of Isis and declare to the world the mystery of life, it will be in another stage of existence, where we cease to know in part and shall know all that is to be known. Until that time shall come, our views of the actual relation of matter to mind must, in the very nature of things, rest solely on conjecture.

WORK OF THE COMMITTEE ON LUNACY.

THE Report of the Committee on Lunacy of the Board of Public Charities of the State of Pennsylvania, for the year ending September 30, 1885, to the Legislature, has just been issued, bound singly, and also in a handsome volume with the Report of the Board of Charities. The document of the Committee on Lunacy occupies two hundred and ninety pages, and is larger than the report of the Board itself. Since it was made, Dr. Thomas G. Morton has succeeded Mr. Philip C. Garrett as chairman, and Charles J. Harrah, of Philadelphia, has been appointed to fill a vacancy in the committee. The report shows the condition of the insane asylums and almshouses (sixty-five of which are found in this State), of most of which photographs were taken by a member of the committee, and lithographs made from these, which have been used with happy effect to embellish its pages.

The report contains lithographic portraits with short biographical sketches of Thomas S. Kirkbride, M.D., and Joseph A. Reed, M.D. Dr. John B. Chapin contributes a paper upon "The Progress and Tendencies in the Care and Treatment of the Insane during the Past Year," and Dr. H. M. Wetherill gives some notes on "Hyoscine Hydrobromate and Hyoscyamine, with Tabulated Observations of their Effects in Insanity," in which gratifying results are shown to have been obtained, especially with hyoscine, in overcoming insomnia and motor excitement. A number of hospital statistics are given, and also the unsuccessful appeal to the city authorities with regard to the rebuilding of the insane department of the Philadelphia Hospital and its removal to a place outside the limits of the city. The great need of a hospital to accommodate the criminal insane is dwelt upon in the report, and at-

tention directed to the fact that hospitals are curative places, which should not be weighted down with a great number of simple defectives in the custody of medical men.

The good results of the faithful performance of responsible duties devolving upon this committee are seen in the reduction in the use of mechanical restraint, in the discovery and removal of isolated cases of neglected and abused lunatics to the State hospitals, and in the greatly-improved condition of the insane throughout the State, owing to frequent visitation and examination. An important safeguard has been afforded by the system of forms which must be filled upon admission or dismission of patients, and also regularly during the course of treatment while in the hospital. It is possible that some of the routine work required of the asylum superintendents might be simplified so that it need not demand so much of their time; but the committee has simply carried out the provisions of the law, and its course has furnished more than sufficient reasons for its existence and justified its appointment.

A resolution was adopted at the last meeting of the State Medical Society, requesting each county society to appoint a Board of Visitors to examine and report upon hospitals and places in the neighborhood where the insane may be found. We learn that as soon as this is done the several boards will probably be made the official visitors of the Committee on Lunacy, which will give them official standing and aid them in their work, and will also facilitate the labors of the Lunacy Committee.

The committee has also issued, as an appendix to the report, a pamphlet entitled "An Almshouse Directory of Pennsylvania," prepared by the very efficient secretary, Dr. Andrew J. Ourt. This little work is very useful for reference.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

MEDICAL Clinic by Professor Germain Sée at Hôtel-Dieu.—The therapeutic views of this eminent clinician are considered of great importance everywhere, and his works have been translated into many languages. In one of his late clinics, entitled "The Causal Medicine and the Biological Remedy," he treated the subject of medicines and their proper applications. We understand by causality anything which happens as the effect of a cause. "The definition of what a remedy really is is as different as are the various reigning doctrines. The true empiric says, 'It is anything that cures a disease or modifies it:' so that with him the medicine takes precedence, so to speak, of the morbid state. The ideal remedy, then, is that which recalls to our minds the memory of the nosological system from which came the famous adage '*naturam morborum ostendit curatis*,' and it is on this traditional axiom that empiric medicine still rests, which, since the days of Soranus, the chief of empirics, up to those of modern scepticism, is still trying to make discoveries by chance, experimenting without any guide, and finding only by accident or exception the means to oppose the disease that is only too real. Shall we banish these old medicines and poisons that have come to us from the savages of India and Africa, or from the votive inscriptions on some old Greek temple? Ought we to condemn *a priori* the panaceas that have slipped into science by chance, or sometimes by the conception of some cracked imagination? The duty of the physician is to submit these illegitimate products to experimental proof, within the measure and limits of scientific reason. A duty still more imperious than this is imposed on the practitioner: that is, to declare the real value of such remedies and fix more exactly their indications, and to say whether or not the disease treated would have been cured just as well and as quickly without the medicine as with it. A true medicine is causal. Not very long ago we found out specific medicines, and every one at once tried to discover in every virulent disease its particular remedy, being encouraged by the examples that tradition seemed to furnish, such as mercury for syphilis, iodine for scrofula, quinine for intermittents, etc. The day that the pathogenetic microbe was made known, this causal form of therapeutics must have felt a revolution. This is the case particularly in obstetrics and surgery, where we can operate and attack the parasite easily in such cases as puerperal infection and surgical septicæmia. But medicine proper only finds the micro-organisms in the depth of the tissues, and it has not as yet been so happy in its results, for we cannot

kill the pathogenetic parasite, and we can only *paralyze* it and check its growth in the tissues with difficulty.

"However, we are now in a way of forming biological anti-microbe laws, showing what is favorable to the man and unfavorable to the bacillus. By these laws the organism is considered as a culture-ground which may be sterilized so as to destroy the parasite. The progress of medicine is just here, and not in any vague considerations of age, sex, temperament, constitution, or diathesis, etc., which have been falsely considered the morbid cause.

"We must, then, create in our organism vital conditions that will be incompatible with the biological laws of the microphyte. In default of a direct attack, there remains the resource of preventing its ravages on any organ affected, and consequently the multiplication and diffusion of the microbe in the body. This is only an indirect causal medication, it is true; but our therapeutic power is not limited to this form, for long before the discovery of the micro-organisms of different sorts, we already had found, in great part at least, the anti-virulents, such as mercury, iodine, etc. These are also known as antiparasitic remedies. It is true that the parasite of syphilis is not yet found; but that of scrofula has just been discovered, and that of intermittent fever is not yet sure: however, we are a long way off from the old talk of the 'contagious agent of syphilis' and the 'miasm theory of paludal fevers.' So that we can from now recognize in these drugs a direct curative power and a destructive means to be used against virulence, and in hygienic therapeutics a regenerative or definite action of the organism against its dangerous invaders. This is real progress. We have, then, the specific action of remedies that are attacking a supposed contagion. Iodine will cure syphilis as well as scrofula, and the sulphate of quinine has an antiparasitic action in several diseases. Why? Simply because iodine and many other drugs must have a general action on several groups of the microbes. There exist, then, medicines that have an action on one single order of bacteria, and others that have an action on several different classes of them, and they are all real curative agents.

"In antiparasitic medication the organism is touched by the drug used, and it reacts in different ways. It was owing to the neglect of this fundamental fact that our first experiments failed when we tried to apply this modern science. When, after the discovery of the microbe, they took to introducing corrosive sublimate into the lung-tissue, they forgot that the field of battle was not neutral ground, and that living organs would not remain indifferent to the presence of the remedy: so that those who looked exclusively after the parasite often injured their patients. The parenchyma impregnated by the drug was often subjected to grave alterations that we should be acquainted with. The doctor who is charged to watch over the biological state must not give way to theory the moment the laboratory indicates the mode of action of the microbe.

"There is a fact that dominates all microbiology, as well as physiology and therapeutics. It is that the vital reaction is always multiple. This law may be formulated thus: There is not a single one of our medicines that has not different properties; not a remedy but has several ends in view; not a single curative agent that is abstract. Iodine or salicylic acid, taken as examples, have physiological effects on the tissues and organs that help or impede its action. It has a biological power on the organism that goes along with its destructive power on the micro-organisms. All these actions should be known to the doctor who proposes to prescribe remedies intelligently. A true medicine is not only a physico-chemical substance; it is essentially vital. Claude Bernard, without attempting to define a medicine, said, 'Any substance introduced into the organism and foreign to the chemical composition of the blood is a medicine or a poison.' But it seems more a question of dose: an excessive dose of the most inoffensive substance will become a medicine or a poison. Common salt is an example of this. The true remedy is, then, of a vital nature, and should take its place according to its physiological action on man in the normal state, and also in the pathological or abnormal. Not only, then, must we carefully take into our account its action on the morbid state which has invaded the different organs, but also its action on the normal life of those organs; and it is this *modus vivendi* that all must first know in order to judge of the effects of a remedy on the economy. There are two kinds of these effects: first, one seen by the simple appearances and derived from pure observation; second, the predominant actions, and they are to be superior in their place as symptoms. The latter are so exact that they almost formulate the mechanism of the physiological action of a remedy. For instance, among the cardiac medicines there are very few that do not have the power to lessen the heart's movements in some manner. Digitalis, veratrine, convallamarine, all act in the same way: so one would think that it was quite indifferent which one was given. But this is not so. Experiment has revealed to us the intimate action of these remedies: that is to say, the *mode* by which they modify the action of the different heart-nerves, or the manner in which they act on the heart-tissue itself. Veratrine acts rapidly on the heart-muscle, and diminishes the intravascular pressure and the number of the contractions. Convallamarine slows the heart by exciting the intrinsic nerve-ganglions; it also increases the energy of the systole and the force of the

blood-pressure. Digitaline acts also to moderate the heart's action and number of its beats, but it soon attacks the muscular fibre and perhaps the elastic texture of the myocardium, accumulating in the muscle and taking away its natural properties. So, then, if we want to lessen the number of the pulsations and raise the dynamic power of the heart, we use digitaline; while veratrine will have quite an opposite effect on the power of the heart; at the same time it will diminish very quickly the number of its pulsations. So the therapeutical applications of a medicine do not come from its apparent effects, but from its mode of action on the organs; and the physiological mechanism of a remedy ought, therefore, to constitute our guide in medical practice. As a final proof of the absolute necessity of knowing the mechanism of our therapeutic agents, take digitalis again. For a long time it was excluded from the treatment of asthenic heart-troubles because it was thought to induce a debilitating action, because it slowed the heart's movements; but now that we know that it augments at the same time the contractile power of both the heart and the vessels, physicians apply the physiological facts and give it more often with success in heart-debility, in atony, and in cardiac dilatations than in hypertrophy.

"We may conclude, then, that every substance becomes a medicine, every physico-chemical can become a therapeutic agent, first, when its primitive or principal action can oppose the destructive action of the pathogenetic parasites; or, second, when it modifies the defective action of an organ, or else supplies the intimate nutrition of the histological elements that have deviated from their usual or normal structure."

Hypnotism for Therapeutic Purposes.—Hypnotism is very much heard of in France, owing to the number of experiments made by Professor Charcot and others in the field of what we once knew as animal magnetism. It is now practised with suggestion of ideas to the patient, who is first put under the magnetic sleep and then ordered to perform acts that may benefit him. This is called "suggestive therapeutics;" and Professor Grasset, of Montpellier, thinks that the time has come when all should try this system and give our clinical experiments to the medical world, so that the therapeutical indications and contra-indications should be fixed. The first question about it is, Is this method uniformly safe for the patient? and to this Dr. Grasset answers, No. For all who try it find that, on constantly producing this artificial sleep in a patient, they can succeed better and better every time that they attempt it in the same person. If a susceptible person be taken who is simply nervous, and one should continue to operate on him, he will get rapidly more and more nervous until he becomes a real hysteric, and, if continued, he may become insane. Barth says that we should be wrong to think that this provoked sleep was a physiological phenomenon, as it is in reality an artificial disease, which only gets worse by continuing it. Nevertheless, one must conclude from the evidence in its favor that it has a really useful therapeutic application; and, after all, there is no medicine worthy of the name that is not a poison, and therefore dangerous under certain conditions to the living organism, while at the same time it may be very useful. There is also a social danger and a possible medico-legal one; but this is so with other remedies that we use very often. From the foregoing remarks we can conclude that hypnotism is a therapeutic agent that should not be allowed to be used by everybody, but that it ought to be reserved for experienced doctors only; and then it ought to be applied according to proper indications, that the clinic can teach us by investigating all published cases and taking the prudent part of them as a mean. To give at once an idea of how the magnetic sleep is used to provoke some therapeutical action by what is called suggestion, we will relate an observation of Professor Grasset's.

The patient was a hysterical one that the doctor had under care for eighteen months. Among the symptoms was a complete flexion of the wrist and all the fingers of the left hand, with complete anæsthesia of the hand and forearm. This had continued for some six months when Dr. Grasset proposed to treat her by hypnotism and suggestion. She accepted, and on the 21st of April he first got her to sleep by fixation of the eyes in six minutes. After a little effort, he got her to show that she could understand him, when he ordered her to move her paralyzed limbs; which she did; when he told her that they moved, and suggested or ordered her to continue to move them after she came to. He then woke her by blowing on the eyelids, and she was able to move her fingers; but several hours afterwards the thumb fell again into flexion. Upon a second application of the method being made, however, it also got well; and, in a third, complete sensibility was restored to the hand and forearm, with ability to use all the fingers and hand, and this continues up to date. Several authors have cited cases similar to this one, in which great good was done and no harm resulted. Bernheim gave some cases where a great improvement was made in handwriting that had been quite impossible before its application. Certain patients not only had their physical symptoms modified, but also intellectual troubles in hysterical cases have been much improved. So that it may be concluded that the success of suggestion is so complete in hysteria that it should be used as a therapeutical agent of cure; and it is particularly useful in those cases who are readily and rapidly put under

the magnetic sleep; and it is also without danger in these cases. The means of causing the hypnotic state is by fixation of the eyes, best done by the doctor who gives the suggestion, as it will be better carried out than by having the sleep produced by some one else. It is best to abstain from using the method excepting for serious therapeutical uses. Its true use is indicated for paralysis or contraction or anæsthesia of a part, as it probably does not modify the nervous system itself, and therefore cannot replace hydrotherapy, for instance, nor constitutional treatment; but it is a powerful therapeutical means of cure, that in selected cases will give good results.

Glaucoma.—Some very practical remarks of Dr. Javal on this subject will not be without interest for the general practitioner, for whom they were intended. "I desire to treat this subject for the reason that it seems well adapted to show the slight use there is in the pretended scientific exactitude which we eye-specialists sometimes are tempted to boast of. And I shall try to treat it in an elementary manner, though it is one of the most difficult subjects in ophthalmology. You know that this glaucoma in its advanced stage is characterized by an augmentation in the pressure on the eye, by a diminution of extent of the visual field, and by a weakening of sight, with conservation of the sense of colors. So that your smart specialist, after having examined the eye with his ophthalmoscope, hastens to measure the tension by means of the tonomètre, the peripheric vision with his perimètre, and the color-sight by Wolfberg's method. I have all these things here; but what is the use of showing them to you? For, remark one thing at the commencement: at the period when it is important to establish the diagnosis, all this arsenal will not help you. The ophthalmoscope itself is of no use, for the famous excavation of the optic nerve so much spoken of does not come until later; and as for the pulsation of the central artery of the retina, it may fail you; and I have seen it also in a perfectly healthy eye. It is important that all should be able to recognize glaucoma from its beginning, for expectation is not permitted in this trouble, and *the instillation of a single drop of atropine can produce an irremediable aggravation in an eye affected with glaucomatous prodroma.* And I will add here something *quite new* for you: which is that *cocaine can produce just as bad effects in these eyes, notwithstanding the diminution of pressure that follows its use.*

"*Diagnosis.*—How will you know glaucoma? For those eyes that are hard to the touch and have perikeratic injection, with a pupil immobile and the cornea dulled and painful, you don't need even the ophthalmoscope; but it is great art to catch them before this. The history mostly is that for months, or even years, the patient finds a slight loss of vision in obscurity, and he finds that in the evening there is a halo around the lights. If you are consulted by a person complaining of a loss of vision that has come on rapidly, and you see the slightest inequality in the pupils, the slightest weakness of the sphincter of the iris, be careful and don't put either atropine or cocaine in the eye; also, don't forget that an eye with glaucoma is not always hard. The halos spoken of are an important symptom. They will see them mostly when a match is struck in the dark; but these halos may occur in other eye-troubles. In this case you have only to instil a little eserine into the eye, and if they disappear your diagnosis is fixed; and it is to this medicine that you must look to help you in this disease at first. The wholesale druggists now manufacture little gelatinous rings of eserine, each containing the one-hundredth of a milligramme of the drug. These you may give to your patient, and if two of them a day do not relieve the symptoms, then surgical interference is called for. I need not say that all alcohol must be stopped, and but little meat allowed, and that well masticated. This, with plenty of out-door exercise and clothing very loose, constitutes the hygienic treatment.

"*Operative Treatment.*—If, with all your care, it continues, don't delay the operation. Sclerotomy should never be thought of. *Iridectomy is the operation;* and I presume that you will not care to perform it yourselves, although it is not so difficult with the aid of cocaine, which may be used only when followed by an operation. But there is one thing you can and should do, and that is, when you find yourself in presence of an acute glaucoma, when moments are precious, practise a *débridement* of the globe near its equator, between the rectus internus and rectus inferior muscles. A bistoury-cut of a few millimetres, as recommended by M. Parinaud, will often give immediate relief, and allow you the time to take the patient to some specialist to have a good iridectomy performed.

"To sum up: *Abstain from atropine and cocaine, and use eserine* in the *first symptoms of glaucoma,* and in case of acute glaucoma don't hesitate to *débrider* the ocular globe."

Swill-milk again.—The Council of Health in Paris have reported in favor of the expulsion of all dairy-cows from the city proper, only tolerating a very few exceptions, the owners of which can show satisfactory conditions of salubrity. There are at present upwards of five thousand of these animals in the capital, and they are found to be a prolific source of pulmonary phthisis. The milk of a great number of them has been shown to be fairly alive with the bacillus which, as we know, wastes the tissues of the cows, and then of poor human beings attacked with

phthisis. A syndicate of dairymen who have stables which they use for these cows, and who have long leases on them, are crying out in the newspapers in the name of vested rights against their business being broken up and no compensation being granted. One of their organs suggests that M. Pasteur might find a means of subduing phthisis in cows, and thus render it safe to drink milk from them when kept in confinement; but the Council of Health has turned a deaf ear to this suggestion, and will continue to do so.

THOMAS LINN, M.D.

PARIS, May 26, 1886.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

Proceedings of first day.

(Continued from page 689.)

DR. JAMES TYSON read the Report of the Committee on Collective Investigation of Disease, the statistics of which had been obtained from the members of the Society, and the statistical report itself had been prepared by Dr. W. A. Edwards. The subject selected for collective investigation was rheumatism, the whole number of cases reported to the Committee being ninety-one. It was thought that no conclusions of value could be drawn from so few cases, and the question was submitted whether it was worth while continuing the inquiry for another year.

On motion of Dr. Bishop, it was resolved that the report be accepted and referred, and the Committee continued for another year.

On motion of Dr. Mills, the report of the Committee on Medical Education, presented by Dr. Jackson, was adopted, and the Committee continued and instructed to urge the passage of an act to establish a State Board of Medical Examiners and Licensers at the next session of the State Legislature.

Dr. Curwen moved that in the annual volume of Transactions the constitution, by-laws, and standing resolutions of this Society shall be published for the information of members and convenience for reference.

Dr. Henry H. Smith moved that in cases of protest against the admission of delegates, they shall be admitted to the floor while awaiting the decision of the Judicial Council. Adopted.

The question having been raised with regard to the appointment of the Nominating Committee in a case where a County Society has been prevented from being represented owing to a protest against their delegates being registered having been referred to the Judicial Council, the President ruled that the delegates of the preceding year shall continue to represent the Society sending them until their successors shall regularly take their seats in the meeting.

The President also requested the Judicial Council, if possible, to present its report on the admission of the Philadelphia delegates at two o'clock this afternoon.

At the opening of the afternoon session Dr. J. M. Anders delivered the Address in Hygiene and State Medicine, taking for his theme

THE PREVENTION OF COMMUNICABLE DISEASES.

The chances for successful prophylaxis of infectious diseases are greatly increased in those instances in which the specific organism has been isolated to which the infectious quality is due. The demonstration of the specific cause of a disease often leads, by inciting further study, to the attainment of certain knowledge concerning the indispensable conditions for its development and multiplication. Communicable diseases are in great measure preventable, provided that the known principles of hygiene are rigidly enforced.

The list of communicable diseases is long and varied, and in recent times has been added that scourge of humanity,—phthisis. In general this class of affections has a common mode of dissemination,—viz., by contagion, by infection, or both, though in varying degrees. As a corollary, there are certain leading principles looking to their prevention, which principles are applicable to them as a class, and they may be conveniently considered under three heads. First, isolation of the patient; secondly, atmospheric purification by disinfection and ventilation; thirdly, purity of the water-supply.

What does proper isolation consist in? Not merely in placing the patient in a separate apartment, having been occupied by other members of the household, but a special room should be set apart for this class of invalids in every comfortable family. Densely-populated centres should afford fever-hospitals. There are few human interests which could be more successfully promoted by an enlightened public sentiment than the proper isolation of those ill with infectious diseases. There are certain indisputable facts opposing the practicability of complete disinfection of ordinary living-rooms after being used for a patient suffering with a contagious disease. Thus, Prof. Tyndall found by experiment that the air of enclosed boxes at the end of three days no longer swarmed with the microscopical particles which were always found to be suspended in ordinary air. These had all attached themselves to the sides of the boxes. Experiments also show that air-borne bodies have no affinity for organic surfaces. The matters floating in the air of a closed room tend to attach themselves to the side-walls, floor, and ceiling. Hence to disinfect such rooms thoroughly it would become necessary to remove all paper from the wall. He

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pointed out the superior advantages of the sick-chamber especially set apart for communicable diseases. Free ventilation is urged. The observations of M. W. Power have also shown that during the almost absolute stillness of the deposit of dew and hoarfrost particulate matter is most actively disseminating itself through the atmosphere, and further suggested the best modes of obviating such meteorological phenomena. The medical profession would do well to adopt speedily the measures recommended by a committee on disinfection of the American Public Health Association.

The conclusions arrived at by this committee show the complete efficacy both of the heat methods and the chemical disinfectants to free the atmosphere from air-borne organic impurities, and from micro-organisms, and from organisms causing diseases. So long as the efforts of mycologists to isolate the specific organism causing typhoid fever and cholera are unavailing, conclusive results cannot be expected from water-analysis. But that impure water is frequently responsible for outbreaks of the above and other diseases is no longer problematic: the subject can now be studied only from the side of practical experience. Finally, the lecturer pointed out the superior advantages of the bill recently introduced into the House of Representatives, having for its object the establishment of a National Health Bureau.

Dr. Charles E. Sajous, of Philadelphia, read the address on "Laryngology."

The author referred to the advances in this specialty, illustrating in a striking manner the advantages offered by the laryngoscope in the treatment of laryngeal affections. Several examples were given in which a positive diagnosis could not be made without it, thus exposing the patient to the dangers of inappropriate treatment. For instance, the differential diagnosis between tuberculous and syphilitic laryngitis, unless a clear history can be obtained, can only be settled with the assistance of the laryngeal mirror, while without it a tentative and erroneous treatment might cause fatal consequences.

These facts and many others being known, the lecturer urged that not a single case of persistent hoarseness should be allowed to pass without laryngoscopic examination.

"What responsibility," he asked, "does not a physician assume in neglecting to employ means which enable him to make a positive diagnosis, and treat the patient accordingly, instead of groping in the dark, guessing, as it were, at the diagnosis and running three chances in five that it is wrong? The laryngoscope has to-day assumed such importance in the domain of medicine that its use should be as general as that of the obstetrical forceps, and the student should not be allowed to leave the walls of his Alma Mater without first demonstrating his ability to manipulate it. He should be taught that with it he can watch over the integrity of the most exposed organ of the body and the shortest avenue between life and death."

The author then alluded to the limited amount of attention given by the general practitioner to the treatment of affections of the nose and throat, outlining the difficulties encountered and the means by which they might be overcome.

Attention was then given to the consideration of a few of the more important suggestions made during the year upon laryngology and its allied branches, pharyngology and rhinology.

The treatment of pharyngitis sicca as advocated by Shurly, of Detroit, was first described and commended. Shurly advocated the use of galvanism, believing the origin of many pharyngeal affections to reside more in the nervous supply than in an inflammatory process. After cleansing the parts thoroughly with an alkaline solution, one electrode is introduced through the nasal passages as far as and the other directly to the posterior wall of the pharynx, both being moved gently over its surface. This is repeated four or five times at each sitting, these being renewed two or three times a week if advisable. The time required for gaining permanent results will vary, of course, according to the kind of case and the state of chronicity present. A four-per-cent. solution of cocaine applied to the pharynx will greatly facilitate the manipulations.

"Alimentation in Laryngeal Phthisis," advocated by Dr. Beverly Robinson, of New York, formed the topic of the next selection. The gradually-decreasing appetite to which these cases are frequently subject, sometimes from the start, is evidently one of the most important elements of rapid decline. If there is appetite, the great suffering occasioned by the passage of food over the larynx causes the patient to limit the quantities taken as much as possible, producing the same deleterious effect on the general trouble. The food introduced by means of the stomach-tube is sometimes retained when everything taken directly by the mouth is rejected. Dr. Sajous recommends for the purpose the instrument devised by D. Bryson Delavan, of New York, consisting of a small rubber catheter mounted upon a soda-water bottle furnished with a rubber hand-bottle. A four-per-cent. solution of cocaine is first applied to the larynx by means of an atomizer, and the catheter is then introduced into the œsophagus by passing it alongside of the laryngeal wall, the tube being previously dipped in warm water, then oiled. Its tip need not reach below the limit of the constrictors, say an inch below the larynx. Milk, eggs, etc., can thus be advantageously administered. At times the stomach rebels and vomiting occurs; washing of the stomach generally restores it to normal action.

The life of the sufferer is invariably prolonged by this method, and, according to Robinson, "occasionally perhaps in a permanent manner."

The use of cocaine in the treatment of the diseases of the upper air-tract formed a very interesting part of the address. In hay-fever the author found it really beneficial in forty per cent. of the cases; thirty per cent. were partially relieved, and the remaining thirty per cent. were not benefited. In one case the application caused intense pain. The drug is best employed in a four-per-cent. solution, or in the form of pellets as manufactured by Wyeth.

Used as an anæsthetic, it has held its own. Cases had been reported, however, in which its application to the larynx had caused distressing action. An overdose can easily be administered by means of the spray. In the case of a physician upon whom Dr. Sajous had performed an operation requiring some time, a four-per-cent. solution was extensively used. During the night the patient found it exceedingly difficult to keep up respiration, his chest and lungs, as it were, refusing to act without the greatest effort on his part. A short period of inactivity on his part would cause a sensation of fainting and "sinking" to begin. This dyspnœa lasted six hours. The next day he could not recall what had happened after the first stages of the operation, or how he got home.

Alluding to an article on "The Headaches Associated with Chronic Nasal Catarrh," by Prof. Harrison Allen, the author stated that such a causation was frequently overlooked by the general practitioner. He had for the last two years obtained satisfactory results in those cases by means of insufflations of morphine, one-eighth grain being blown as high up as possible into each side of the nasal cavity by means of the auto-insufflator. A solution of cocaine is sometimes advantageous; but it occasionally induces the very trouble it is used to master, and is therefore not as reliable as the morphine.

The use of chromic acid in the treatment of hypertrophic rhinitis, strongly recommended by European authors, had also been very useful in the author's hands. Instead of embedding the crystals in cotton, however, as practised abroad, he found it more convenient to place a few crystals on the side of a flat probe and to hold them over the flame until melted. The acid assumes a "crushed strawberry" color and adheres very closely to the instrument. If held too long over the flame, it carbonizes and becomes useless. He had observed a case of poisoning by this agent. Repeated applications at short intervals caused an eruption to appear resembling that of varicella; the pulse was high, and the patient complained of general malaise. Cessation of the applications was immediately followed by the disappearance of all these symptoms.

"Hemorrhage after Uvulotomy," forming the title of a remarkable paper by Dr. E. Carroll Morgan, of Washington, who had himself observed a severe case, closed the address. Although exceedingly rare, the list of cases presented indicated that this accident was of possible, although of rare, occurrence, the unfortunate tendency which prevails to amputate the uvula at its base increasing greatly the liability to bleeding.

The reading of voluntary papers being called for, Dr. C. W. Dulles read a communication entitled

SOME RECENT ANNOUNCEMENTS OF PASTEUR CONCERNING HYDROPHOBIA.

The reader of the paper called attention to the acknowledged difficulty of diagnosis in cases presenting nervous symptoms supposed to be caused by the bite of a dog, and showed that many that had been thought to be hydrophobia were in reality tetanus, meningitis, or some other disease. Dogs are often said to be mad when they only have the distemper. The experiments of Pasteur are open to severe criticism on account of the lack of precaution to prevent error. The diagnosis of hydrophobia is accepted, and the patient treated and claimed as a success, even when the dog which bit the patient was not mad, as in the case of the Newark children. Attention was called to the great increase in the number of cases reported, and this was attributed to the effects of the publication of Pasteur's investigations, which have caused much agitation and needless alarm in the community. Dr. Dulles reported several cases coming under his own observation which had been pronounced to be hydrophobia, but which he had discovered to be some other disease. The paper was written to allay public alarm upon the subject.

The discussion was opened by Dr. C. K. Mills, who considered that the cases presenting the classical symptoms of hydrophobia are generally some disease of the nervous system like tetanus. Such had been the case in a number of cases he had investigated.

On motion of Dr. Woodbury, Dr. Dulles was requested to continue his study of the subject and report upon the same at the next meeting, when a suitable hour shall be appointed for the discussion of this important topic.

Dr. S. Solis Cohen read a paper on

INHALATION OF COMPRESSED AIR AS AN AID TO NUTRITION IN THE TREATMENT OF PULMONARY CONSUMPTION.

Although pneumato-therapy has been practised by European physicians for twenty-five years or more, the bulk of American physicians are still either wofully ignorant or indifferent to its value. Almost, if not absolutely, the sole American contributor to its

literature up to two years ago was Dr. J. Solis Cohen; in a series of articles published since 1867, and as late as May, 1884, in an address before the American Climatological Association, he had referred to it as a neglected therapeutic agent. Since then, chiefly through the exertions of the gentlemen connected with the so-called "Pneumatic Cabinet," interest in this method has increased; and, while he could not approve of their unprofessional methods or unscientific and extravagant claims, he thought that they deserve great credit for their energy in pushing what is a very valuable therapeutic resource. As for the apparatus in question, he felt constrained to say, as he believed that Dr. Platt, of Brooklyn, had conclusively shown, that the effects were no different and no better than those obtained by simpler and cheaper methods. The cabinet was neither new in principle,—as has been erroneously claimed,—nor could it be demonstrated that its physical or therapeutic effects were different in kind from those of similar modifications of pressure produced in other ways. As for "mysterious virtues," we need not take them into account in serious scientific discussion. In making these strictures the lecturer disclaimed any motive other than impartial regard for truth. The effects were then reviewed of altered pressure when the pressure within the chest exceeds that of the outside atmosphere. He showed that this method caused distention of the pulmonary alveoli to their full capacity, reopened collapsed lobules, cleaned out occluded areas, relieved congestion, and promoted circulation. In addition to this, he urged the practice of systematic pulmonary gymnastics. Whatever views we may hold of the etiology and pathology of phthisis, tuberculosis, and the group of chronic pulmonary diseases, it must be admitted that clinically they are characterized by "consumption," *i.e.*, failure of nutrition. In conclusion, the histories of five cases which had been cured or greatly benefited were read, and a large number of others referred to in which equally satisfactory results were reported. In addition to the pneumatic treatment, the lecturer recommended overfeeding, and the approved medicinal and hygienic management. Good results depend upon, and are manifested by, the restoration of nutrition.

Dr. Edward Jackson, of Philadelphia, then read a paper on

THE RELATION OF EYE-STRAIN TO HEADACHE.

Headache due to eye-strain is very common. The constant tendency of business and amusement is towards taxing the eyes more heavily, and it is not surprising that the balance between the capacity and need for seeing is so often lost. Cases of headache arising from strain of accommodation in eyes presenting a high degree of hypermetropia with astigmatism in a healthy person, a lower degree of hypermetropia in one in poor health, in the emmetropic eyes of a very hard student, in connection with insufficiency of the internal recti muscles of emmetropic eyes, and in connection with a tendency to vertical deviation of the optic axes,—these serve to illustrate that such headaches arise not from a certain defect of refraction or the strain of any particular muscle, but from requiring of the muscles necessary to vision or the nerve-tracts connected with them more than these portions of the muscular and nervous systems are capable of doing. The clinical characters of these headaches are identical with those of all other classes of headaches, and therefore do not aid in diagnosis, which may sometimes be made on the sequence of strain and ache, but at others is possible only by the removal of the strain.

The essential lesion of these headaches may be held to be an impairment in the nutrition of the gray matter of the medulla, where the roots of the fifth cranial and great occipital nerve come in close relation with the nuclei of the motor cranial nerves; this hypothesis being in harmony with the known facts of physiology and pathology. Hence they would be helped by any measures calculated to improve the nutrition of the part, such as good food, tonics, rest, and the removal of all depressing influences acting through the general nervous system, or by local measures removing strain by eye-rest, or the aid of prisms and lenses.

The following motion, offered by Dr. Dulles at the morning session, was taken from the table:

"*Resolved*, That it is the sense of the Society that when a protest is presented against the admission of delegates from county medical societies, this shall not act as a bar to their registration, but that they shall be registered upon presentation of such certificates as are provided for by Article III. of the Constitution, and not be deprived of the rights of delegates until the charges of the protest are established."

After considerable discussion, the resolution was adopted.

The afternoon session then adjourned.

In the evening a complimentary reception and banquet were given by the Lycoming County Medical Society to the State Society, at the Park Hotel.

(To be continued.)

PHILADELPHIA ACADEMY OF SURGERY.

A STATED meeting of the Philadelphia Academy of Surgery was held June 7, 1886, Dr. S. W. Gross being called to the chair.

Dr. De Forest Willard: I wish to exhibit a catheter to be used where there are blood-clots in the bladder as a result of enlargement of the prostate body or other conditions

at the neck of the bladder. The only blood-catheter of which I know is that of Gross, in which the opening is at the end closed with an obturator. This leaves only a small opening for the passage of clots. The catheter which I exhibit is provided with very large eyes, which remain closed until the clot, which is usually at the neck of the bladder, is passed. The obturator is then removed, and as it is withdrawn it exerts a certain amount of suction, which tends to start the flow. If the eyes of the instrument become clogged, the introduction of the obturator readily frees the openings from clots.

DISCUSSION.

Dr. R. J. Levis: What is the experience of the chairman with injections of alkaline solutions for the purpose of liquefying clots in the bladder?

Dr. S. W. Gross: I have not had the slightest experience with such injections. I have had two cases in which the bladder was filled with clots. Both occurred in precisely the same manner, and occurring in this way it must be an accident of extreme rarity. One case occurred ten years ago, the other four years ago. In each case the surgeon had attempted to dilate a stricture with the ordinary steel bougie. In each case a false passage was made, with retrograde hemorrhage, and in each case the bladder was filled with more or less solid clot. In the first case I opened the membranous urethra, and with a small spoon such as is used for olives I was able to remove the clots. In the second case, having no suitable instruments with me, I made an opening through the rectum. In both these cases there had been suppression of urine for two or three days, and both cases died. I have never seen a case in which I had to make injections into the bladder to get rid of clotted blood.

Dr. R. J. Levis: I had supposed that the ordinary treatment was injection of carbonate of soda, and if necessary the introduction of an instrument to break up the clot. This seems to liquefy the clot, and I believe that there is good authority for its use. I have employed it a number of times with good results.

Dr. S. W. Gross: Dilute vinegar will do the same thing; but it will be remembered that in the cases which I reported there was stricture with a false passage, and that there was no ingress into the bladder. In ordinary cases the injection of soda or dilute acetic acid will probably do well. In some cases you can wait and allow the clots to subside, and aspirate above the pubes. In other cases it might be a good plan to introduce a small Bigelow tube, break up the clots, and evacuate them. In my cases the opening of the bladder had nothing to do with the fatal result, and I should not hesitate to adopt the same treatment in similar cases.

Dr. De Forest Willard: I recently had a case in which the middle lobe of the prostate was enlarged and very spongy. I introduced the catheter with great care, but this was followed by profuse hemorrhage entirely filling the bladder. The bladder reached to the umbilicus. A large number of clots were passed. On attempting to withdraw the clots through the catheter the instrument became quickly clogged. On the second day there was no pain, and some small clots had been passed. Realizing the gravity of the case, I called a consultation. I thought it necessary to remove the clots, but it was decided to allow them to remain. In three or four days septic symptoms appeared. My own feeling was that an opening should be made through the perineum and the clots removed; but I was dissuaded from this by the consulting surgeon, and in about four days the man died.

At the post-mortem the bladder was found still filled with coagula. The middle lobe of the prostate was moderately enlarged and ulcerated.

OSTEO-POROSIS.

Dr. De Forest Willard: I have here two specimens of osteo-porosis. The first was obtained from a case in which amputation was performed six months ago. A second amputation became necessary ten days ago. The second specimen is from a case operated on three years ago. Both were cases of railroad crushing with great injury to the parts. In the first case the amputation was done at the tubercle of the tibia. The flaps sloughed, leaving the posterior flap on a line with the articulation of the knee-joint. The wound refused to heal, and some particles of bone were discharged. As there was complete anchylosis, it was impossible to bend the knee back so as to give the man a chance to walk on it. Re-amputation, therefore, became necessary. When the bone was removed and submitted to the action of a stream of water, the fatty contents were removed, and only a shell of bone remained. This can be readily crushed with the finger. I do not believe that this is simply a fatty change, the result of non-use, which is sometimes given as the cause of osteo-porosis. It seems to me to be more the result of osteomyelitis depending upon the original injury.

The second case was operated on three years ago, amputation being performed just below the knee for a similar injury. After four months re-amputation was required. The whole structure of the bone readily breaks down under the finger.

Dr. J. Ewing Mears: In connection with the specimens presented I desire to call attention to some specimens presented in 1870 to the Pathological Society of this city. This was a case of hyperostosis with internal osteo-porosis. The specimens had, unfortunately,

been subjected to a process of long bottling, and therefore they were unfitted for careful pathological study. As one of the specimens presented to-night is recent, it seems to me to be desirable to submit it to careful examination to determine the exact pathological condition present.

The term osteo-porosis is a general term which may be applied to rarefaction occurring in the interior of bones, internal osteoporosis. Its use does not signify the pathological condition which is present. The question raised as to these being specimens of osteomyelitis, or rather fatty degeneration, is germane to the subject, and should be considered. Dr. Willard has not given us any information as to the previous history of the case. This condition has been found associated with syphilis and tubercular conditions.

Dr. Willard: There was no history of previous disease.

Dr. S. W. Gross: The specimens which have been presented, I think, do not illustrate osteomyelitis, as has been suggested. They are either examples of rarefying osteitis or of degeneration the result of trophic changes.

Dr. Mears: In the specimens to which I have referred there were three conditions present,—hyperostosis, internal osteo-porosis, and secondary induration. It would be interesting to have this bone submitted to careful examination.

The following committee was appointed to examine the specimen and report at the October meeting: Dr. De Forest Willard, Dr. J. Ewing Mears, and Dr. J. Henry C. Simes.

(To be continued.)

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held May 26, 1886, the President, JOHN A. WYETH, M.D., in the chair.

CALCIFIED TISSUE IN THE SPLEEN.

Dr. WALDSTEIN, of the Committee on Microscopy, reported that the specimen presented by Dr. George F. Shrady at a recent meeting was one of chronic perisplenitis with calcification of the tissue, the calcified plate being seven centimetres long by three and a half wide. The specimen was very rare.

FIBROID TUMOR OF THE UTERUS.

Dr. H. MARION SIMS presented the specimen for a candidate. The tumor was larger than a child's head. The patient died some days after the operation, of intestinal obstruction caused by an adhesive band passing over the sigmoid flexure.

TRAUMATIC PERINEPHRITIS FOLLOWED BY TUBERCULAR NEPHRITIS, ETC.

Dr. T. M. PRUDDEN presented specimens removed from the body of a man who died three years after having sustained a kick in the side by a horse. The injury was followed by a perinephritic abscess, which left a permanent fistula with a continuous discharge of pus. The autopsy showed a perinephritic abscess communicating with an abscess in the spleen, and thence with one in the base of the left lung. The kidney was the seat of miliary tuberculosis, there were two tubercles in the upper portion of the left lung, and an area of solidified tissue around the abscess in the lower portion of the same lung; the mesenteric glands were enlarged; the liver was enlarged and waxy. In reply to an interrogatory by Dr. Waldstein, Dr. Prudden said he had been unable to find any old tubercles, and he had concluded that the tubercular development was secondary to the injury and perinephritic abscess. But we should always remember the possibility of there being an old tubercular process in some portion of the body which we could not find.

LEUCÆMIA.

Dr. HODENPYL presented specimens removed from the body of a man who up to eight months ago was in perfect health. At that time he received an injury on the left hand, followed by an indolent ulcer of the arm, and later by another of the leg. The patient's health declined, anasarca developed, his complexion became a dirty white, the mucous membranes were almost bloodless. The white blood-corpuscles were greatly increased in number. There was an anæmic bruit over the heart. The temperature was 101.6°. There was some dyspnœa and cough. The autopsy revealed enlargement of the spleen and perisplenitis, enlargement of the liver, a moderate amount of diffuse nephritis, and enlargement of the lymphatics. There was some fluid in the pleural and pericardial sacs.

MULTIPLE STRICTURE OF THE ŒSOPHAGUS—GASTROTOMY.

Dr. A. JACOBI presented the œsophagus and part of the stomach of a man in whom were found at the autopsy the following lesions: multiple strictures of the œsophagus, commencing acute peritonitis near the wound where gastrotomy was performed, chronic endocarditis, chronic bronchitis, emphysema, broncho-pneumonia, acute pleurisy, chronic diffuse nephritis, chronic interstitial nephritis, chronic gastritis. The patient in 1885 drank some spirits of ammonia by mistake. Since then there had been gradually-increasing difficulty with swallowing. Lately he had difficulty in swallowing even liquids. A short time ago a physician attempted to pass œsophageal bougies, and a small one was said to have entered the stomach. The patient on entering the hospital was found to weigh eighty-eight pounds; formerly he weighed one hundred and sixty pounds. Numerous

efforts were made to pass small bougies. They passed some of the strictures, but none could be made to enter the stomach. The smallest stricture was situated near that organ. Finally gastrotomy was resorted to. An incision two inches long was first made, and afterwards, on account of the difficulty of reaching the stomach, was prolonged to three inches and a half. The stomach was then stitched to the incision in the abdomen with a large number of stitches, so as to cause adhesive inflammation to take place more rapidly. It was then resolved not to make the opening in the stomach for a few days, until after adhesion had been completed. Meanwhile, alimentation was to be continued by rectal enemata. The patient died a number of hours after the operation, of exhaustion.

In addition to the lesions already mentioned, the speaker called attention to the principal stricture of the œsophagus, situated near the stomach, sixteen and a half inches below the teeth. There were wounds of the mucous membrane at the seat of the different strictures, being evidently the result of attempts to introduce bougies. There was a communication between the œsophagus just above the lower stricture and the stomach by way of an artificial duct made by a bougie, in the course of which was an abscess which contained pieces of egg-shell. The case illustrated the danger of œsophageal bougies even when very gently used.

CONGENITAL CHOROIDO-CYCLITIS IN ONE EYE THE CAUSE OF SYMPATHETIC IRRITATION IN THE OTHER EYE AFTER THE THIRTY-SEVENTH YEAR.

Dr. HERMANN KNAPP presented an eyeball affected with choroido-cyclitis, probably congenital, which he removed from a woman 37 years of age. When the patient was six weeks old, her parents noticed two black patches in the upper ciliary region. She had never seen with that eye, but it had given her no trouble until three months before Dr. Knapp saw her, at which time the other eye became intolerant of light and weak in sight. The irritation having continued, the blind eye was removed. The cornea was shrunken. There were two small nodules in the upper ciliary region, the pupil was enlarged, irregular, and completely immovable. Brownish masses projected into the vitreous, and were distinguishable from tumors only by their ill-defined superficies. The vitreous was bloody and watery. The retina in the posterior half was thin, and so firmly attached to the highly atrophied choroid that only one blood-vessel betrayed its presence. The optic disk showed a marked glaucomatous excavation. Section of the optic disk was reddish, the subvaginal space was enlarged, and its soft trabecular tissue reddish and abundant. Through the thickened and irregular ciliary region a thick pseudo-membrane stretched unbroken transversely through the globe. When it was incised, serous fluid escaped. Dr. Knapp remarked that this condition was not rare in old degenerative process of the eyeball. The most remarkable feature in the case was the lighting up of sympathetic irritation by a congenitally-diseased eye after a quietude of thirty-seven years, during which time the morbid process, though steadily advancing, had caused no disturbance whatever.

CEREBRAL HEMORRHAGE.

Dr. FRANK FERGUSON presented the brain and spleen of a man who died three hours after transportation to the hospital by the ambulance. He was found comatose, the pupils contracted, the respiration stertorous. There was no elevation of temperature and no paralysis. As he had just before entered a drug-store for something to relieve pain in the abdomen, it was supposed he had obtained opium and had taken an overdose. The autopsy revealed a large hemorrhage into one of the cerebral ventricles; also a large infarction of the spleen, interstitial hepatitis, and diffuse nephritis. There was considerable hypertrophy of the left ventricular wall, with dilatation of the cavity; there was a large vegetation upon the cusp of the aortic valve, and a small ulcer on the mitral valve. The pulse had been 40 to the minute.

Dr. JACOBI remarked that the low pulse-rate should have excluded opium-poisoning from the diagnosis.

Dr. JOHN C. PETERS read a scientific communication from Dr. Middleton Goldsmith on gangrene, including some original experiments.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, MAY 24, 1886.

The President, DANIEL LEWIS, M.D., in the chair.

DISEASE OF THE EAR IN CHILDHOOD.

DR. E. BENJAMIN RAMSDELL read the paper, which was prepared more for the purpose of calling the attention of the general practitioner to the importance of these cases than with the hope of instructing the specialist.

The importance of early attention to disease of the ear in childhood was apparent from a study of the anatomical relations of that organ.

Ninety per cent. of nearly four hundred cases of disease of the ear, at the Manhattan Eye and Ear Hospital, in children, were affections of the middle ear, and only one per cent. of the internal ear and auditory nerve, while nine per cent. were cases of disease of the external auditory canal.

Dr. Ramsdell narrated a number of cases of acute suppurative disease of the middle

ear in children seen in private practice, in all of which after some days of treatment the discharge ceased, the drum-membrane healed, and the patient's hearing became normal or markedly improved.

The treatment adopted consisted in cleanliness and astringents, together with attention to catarrh of the naso-pharynx. He had the ear douched with warm water two or three times a day with a fountain syringe; in some cases dropped into the ear ten or fifteen drops of a solution of peroxide of hydrogen; dried the ear with a piece of absorbent cotton on a probe; blew in a little iodoform, sufficient to form a thin film on the surface of the cavity, or, in some cases, powdered borax. Sometimes it was necessary to employ a solution of nitrate of silver or other astringent. If polypi existed, they were to be removed by the curette.

DISCUSSION.

Dr. D. B. St. John Roosa opened the discussion with an appeal to the profession for more general and early recognition and treatment of disease of the ear in childhood. Scarcely any organ in the body responded more readily to treatment, and none scarcely was more important to the individual. There might be slight variation in the treatment by different specialists, but all agree upon the importance of cleanliness and such astringents as the author had recommended, and this simple treatment was sufficient in most cases to cure the disease. As the author had said, the treatment was chiefly local. He did not approve of a method which some now employed, and which was as old as Hahnemann.

Dr. O. D. Pomeroy spoke a word in favor of the general practitioner, for, he said, it was extremely difficult to examine the ear of children and to see the drum-head; moreover, the disease after scarlet fever was often very rapid in its ravages, and offered no opportunity for treatment. Even in his own family he had overlooked acute otitis media until after the discharge had taken place, the patient being too small to make the nature of its sufferings known. It was a good rule, when a child complained without other apparent cause, to examine the ears for disease. He thought suppurative disease of the middle ear in children was less dangerous in proportion to its severity than in adults.

Dr. Simon Baruch thought one reason why so many cases of disease of the ear were overlooked until after discharge of pus was the fact that many began during the desquamative stage of scarlet fever, at a time when the physician had either relaxed his efforts or entirely ceased his visits. He now made it a custom to pull gently the little one's ears, and by other measures try to detect any signs of otitis during an attack of scarlet fever.

Dr. David Webster, in reply to the President, said that he thought iodoform could be dispensed with, as boric acid was equally beneficial.

As to the present means of inflating the middle ear in children, he said the Eustachian tube was patulous at this age, and by closing one nostril and blowing into the other air would surely enter the tube.

Dr. J. A. Andrews thought iodoform did harm in acute otitis, as it was irritating and did not dissolve. Tannic acid was also insoluble and useless. Boric acid was most beneficial.

Dr. Garrish thought constitutional measures were important, especially in scrofulous subjects. In addition to the douche, he employed hot poultices, and also leeches and an anodyne of tincture of opium and sweet oil.

Dr. Laurence Johnson mentioned an instance illustrating the value of such simple methods of treatment as had been adopted by the author of the paper. In an institution with which he was connected he gave instructions to the nurses to douche the ears of the children suffering from a chronic suppuration of the middle ear. His instructions were carried out with regard to the girls, and at the end of some days all manifested improvement; they were not carried out in the case of the boys, and at the end of the same time not one showed any improvement. He thought there was danger of using the douche too frequently and too long, which would have the effect of a continued poultice. He did not employ it until after the borax showed moisture.

Dr. Leszynsky related a case showing the difficulty of diagnosticating disease of the middle ear at an early date; the patient had shown symptoms of meningitis, and disease of the ear was not suspected until a discharge took place, after which the other symptoms disappeared. In another case there was no response to constitutional treatment until after local treatment had been employed.

Dr. Messenger had made it a rule to treat his own cases, not to send them to the specialist, and he was convinced that if all physicians would adopt such simple measures as had been recommended to-night there would be fewer cases of deaf-mutism and suppurative inflammation of the ear. He condemned iodoform as being worse than useless. He had obtained benefit from cocaine in some cases of ear-disease in the adult. He paid particular attention to the patient's general condition, and said that children would recover from almost any disease if they had proper feeding.

Dr. Holcombe had been astonished at the author's success in healing the drum-head after opening from suppurative inflammation. He found an effectual method of cleansing the ear of pus in the use of a long rubber tube, drawing the pus into the tube by in-

spiration. Its entrance into the mouth was guarded against. He thought there was danger of doing harm with the syringe and with inflation carelessly performed.

He claimed to be the first to prove the tolerance of strong solutions of nitric acid applied to the ear, and also to have introduced the cotton probe.

Dr. RAMSDELL closed the discussion, after which the Society adjourned until the fourth Monday in September.

NEW REMEDIES AND CLINICAL NOTES.

DERMATITIS FEROX.—J. L. Milton describes a rare form of skin-disease in the *Edinburgh Medical Journal* for March. "The outbreak of this affection seems in every instance to take the form of one or more scattered patches on the face, hands, or upper part of the chest, and sometimes on all three together. The patches, at first only reddish, speedily become of a vivid red (lake), and then red mixed with brown, the cuticle turning dry and crumpled, and then peeling off, to be replaced by another layer, which in its turn shares the same fate. Now and then a small part of a patch may ulcerate, but this is an extremely rare complication, and usually the morbid state disappears by the gradual declension of the redness and slow reproduction of unhealthy cuticle, which is also little by little replaced by a more normal covering. There is usually no discharge, nothing in the shape of a scurf or crust. The patches, as a rule, form very slowly, and it is only after a time, and when they have become rather extensively developed, that the health begins to suffer; but in other cases a difference in the process may be noticed in so far that the eruption takes place rather quickly, and that the health fails within a few days after its appearance. Sometimes, when the disease attacks the side of the face in the male, firm crusts will form, so that at the end of a week the case looks like one of rather advanced erythematous sycosis. Such crusts may crack, and under the lens small spots can be seen, which look as if thick serum were exuding from them, but in the early stages at least there is no weeping, as in eczema. The site of each crust is surrounded by a red inflamed ring, much broader than is seen round a sycosis patch, which is also infinitely slower in forming. In every case which has yet come under my care the affection of the skin has shown itself first, and the constitutional disturbance later, sometimes much later.

"The patches are in general quite isolated, and at first not very large, the predominating shape, if anything with such an irregular outline can be said to have a shape at all, being a ragged oval. Usually they are, as stated, of a lake color, and this seems to betoken a milder phase; in two cases, where the hue might very fitly have been compared to carmine, the constitutional disturbance was out of all proportion to the extent of skin affected. After a time, and particularly when they are seated on the face, two or more patches gradually fuse, and take on a dark, angry hue, which gives the part the look of having been burnt with fire. Now and then they assume a papular form, and then resemble flattened, aggregated lichen spots; these appear to be overlaid by a cuticle not unlike the horny covering of lichen. On other patches the cuticle, after taking on a brown crumpled look, is cast off, as in the rising stage of eczema. In a third set of patches the scarf-skin may be fairly adherent.

"The constitutional symptoms point to much and often grave disturbance of the health. General uneasiness, feeling of being unwell, sometimes of the system having taken the alarm, loss of appetite, nausea, headache, inability to walk straight, and prostration, are, perhaps, the most prominent and frequent among the many signs which arrest the attention of the practitioner.

"It will thus be seen that, while the affection in some features resembles acrodynia and erysipelas, it is yet distinct from both. It runs a much slower course than either, and in it the constitutional symptoms come on much later. The phlyctænæ, pustules, œdema, and perspirations of the former are wanting. When it attacks the face it is accompanied by none of the swelling and closing of the eyelids which so distinctly mark erysipelas. It is sometimes attended, too, by the formation of huge bullæ at a distance from the chief site of active disease. Though, perhaps, in this complaint the skin is just as much poisoned by the air as it is by the aniline and arsenic dyes in a case of glove or sock poisoning, yet we do not find the sudden swelling, heat, tenderness, and subsequent discharge of serum seen in the latter affection. On the contrary, every one of these symptoms may be absent; indeed, redness and exfoliation are usually the sole local signs. But, while I never saw much internal disturbance, and particularly internal disturbance culminating in delirium, from the aniline dye affection, I have met with both under a very pronounced form in this kind of dermatitis. And no form of poisoning of the skin which I have either read of or seen, or any variety of erysipelas known to myself, is ever followed, as dermatitis ferox sometimes is, by a raised, fused, red, papular eruption. For all such reasons the latter seems to me a distinct individual complaint."

TWO CASES OF EXTIRPATION OF INTRACRANIAL TUMORS.—The first case operated on was successful, by Durante, as translated from *Bull. della Reale Accad. Med.* (by F. R.

Campbell, M.D., *Buffalo Med. and Surg. Journ.*). Patient, male, age 35 years, constitution good. The left eye projected from the orbit and turned out: this change had begun three months before. The patient complained of gradual loss of smell and memory, with a feeling of emptiness in the head. Motion and sensation were unchanged, as were the hearing, taste, and digestive functions. From these symptoms Durante diagnosticated intracranial tumor pressing on the olfactory nerves, anterior lobes of the brain, and penetrating the orbital cavity through its roof. An incision was made from the inner angle of the left eye towards the left to the hair; the flap of skin was turned down, and a portion of bone was removed from over the orbit about two inches square. On removal of the inner table, the tumor was removed and drawn out. Its pedicle was attached to the dura mater of the left lobe. A prolongation of the tumor had extended into the ethmoidal cells, and also had depressed the roof of the orbit without descending into it, and had compressed the anterior lobe of the cerebrum. The tumor, a sarcomatous growth about the size of a small apple, was removed, and, on the fifteenth day following operation, the patient was discharged cured.

Another case of tumor of the brain partially extirpated is reported by Dr. Hirschfelder (*Pacific Med. and Surg. Journal*). Patient a German, age 33 years, personal family history good. Symptoms were as follows: headache, vertigo, vomiting, unilateral paralysis, and atrophy of the optic nerves. Epileptic and epileptiform convulsions occurring without loss of consciousness indicated a cortical seat of the growth. It seemed evident that the motor centres around the sulcus Rolando on the right side were the seat of the growth, from the fact that the face, arm, and leg centres apparently were affected. It having been found that the seat of sensation exists in the parietal lobes of the brain, and since anæsthesia existed in this case on the left side of the face, the neoplasm was located in the middle part of the gyrus postcentralis. Dr. Moore operated February 15, 1886, with the trephine, making an opening of three inches across the skull. The dura mater was tense and white at the posterior part of the wound. Here, on palpation, it was found more dense and prominent. The dura mater was slit open on a grooved director and a mass of gliomatous tissue was removed, about two and a half cubic centimetres in size. Blood, broken-down tissue, and gliomatous material continued to exude, and, finally, the patient died on February 23, 1886. A post-mortem was not allowed. The intimate connection which existed between the gliomatous and brain tissue in this case prevented a successful operation.

Transfusion in Typhoid Fever.—A case of typhoid fever successfully treated by transfusion is reported by Dr. William S. Whitwell in the *Pacific Med. and Surg. Journal* (April). On August 26, patient had a fever-temperature of 102½°–103° F., and had two bloody stools. The temperature was registered as normal on August 31, and the patient seemed to be getting on well until September 5, when temperature again rose to 102° F., and on September 8 it rose to 106° F. Ice was then applied to the head, and quinine and antipyrine were given in twenty-grain doses per rectum. The temperature ranged between 103° and 106° from the above date till September 14. Decided abdominal swelling, subsultus tendinum, and irregularity of pupils indicated the gravity of the case. On September 14 consolidation of left lung developed, which was dissipated by a jacket-poultice and small doses of digitalis. During the eve of the 15th and morning of the 16th there were three small stools mixed with blood. On the 18th there were three similar stools. Murchison's treatment to stop the hemorrhage was tried (tannic acid, turpentine, and chloroform). On the 19th there was a large stool mixed with blood, with a fall in the temperature of two degrees. On the morning of the 21st Dr. W. was summoned for a severe hemorrhage, and by the time of his arrival another had taken place. The patient was much exhausted, respirations rapid, pulse over 100, and body cold. Later, two more bloody stools were passed. The amount of blood lost on this occasion was about eighteen ounces. With the aid of Drs. A. P. Whitwell and C. Max Richter, a saline solution was injected into the median vein of the left arm to the amount of fifteen ounces, when it had to be stopped on account of the utter collapse of the patient. This was overcome by whiskey, which strengthened the pulse at the wrist somewhat, but still death seemed imminent. Dr. Whitwell then determined to transfuse blood in its entirety, and with a simple Aveling's apparatus six ounces of blood were injected from the nurse into the patient. Again the distress of the patient was very great, but the pulse was sustained. Ergotin was injected over the abdomen. This injection (fifteen grains of Bonjean's ergotin) was repeated, twenty minims of McMunn's elixir was given, and strong black coffee was administered to the patient each half-hour till the body became warm and dry. On September 22 the temperature registered 101¾° F., and on the 26th a bronchitis sent the temperature up to 104½° F.; but upon this date convalescence set in, and October 4 the temperature was normal.

Mechanical Device to Prevent Snoring.—The traditional Yankee clothes-pin not having met with much favor, although often recommended to cure snoring, an ingenious Englishman has recently invented an elastic bandage to keep the mouth closed during sleep.

MISCELLANY.

THE ASSOCIATION OF AMERICAN PHYSICIANS.—Pursuant to announcement, the first meeting of the "Association of American Physicians" (limited) was held in Washington, D.C., June 17 and 18, 1886. Francis Delafield, M.D., of New York, was chosen President. The subject of the President's Address was "Chronic Catarrhal Gastritis."

The first paper was on the "Tendon-Jerk and Muscle-Jerk in Disease, especially with reference to Posterior Spinal Sclerosis," by Drs. S. Weir Mitchell and M. J. Lewis, of Philadelphia.

F. Peyre Porcher, M.D., of Charleston, South Carolina, read a paper on "Typhoid Fever."

The discussion of the question, "Does the present state of knowledge justify a clinical and pathological correlation of rheumatism, gout, diabetes, and chronic Bright's disease?" was opened by Drs. James Tyson and William H. Draper.

Dr. James T. Whittaker read an interesting paper on "Spasm of the Glottis in Rickets."

"Notes on some Cases of Diaphragmatic Pleurisy" was read by Dr. E. T. Bruen, of Philadelphia.

Dr. T. Mitchell Prudden, of New York, gave a demonstration of bacterial cultures from a case of mycotic endocarditis in man, and of specimens showing the experimental production of the disease in man.

On the second day, Dr. W. F. Councilman, of Baltimore, read a paper on "Certain Elements of the Blood of Malarial Fever;" Dr. H. W. Lyman, of Chicago, read a paper on "Tetany;" Dr. R. H. Fitz, of Boston, contributed an essay on "Perforating Inflammation of the Vermiform Appendix, with Special Reference to its Early Diagnosis and Treatment;" Dr. William H. Polk, of New York, one on "Peri-Uterine Inflammation;" Dr. William H. Welch, of Baltimore, "An Experimental Study of Glomerulo Nephritis;" Dr. William Osler, of Philadelphia, "On the Bicuspid Condition of the Semilunar Valves and its Relation to Aortic Valve Disease;" Dr. George M. Sternberg, U.S.A., "On the Bacillus of Typhoid Fever;" Dr. E. C. Seguin, of New York, "A Clinical Report of Nine Cases of Hemianopsia;" Dr. H. Formad, of Philadelphia, showed specimens of "Cyanotic Induration of the Kidneys." A number of papers were read by title. Some of the discussions were of unusual interest.

The officers elected for the ensuing year are as follows: *President*, Dr. S. Weir Mitchell, Philadelphia; *First Vice-President*, Dr. Francis Minot, of Boston; *Second Vice-President*, Dr. R. Palmer Howard, of Montreal; *Secretary*, Dr. George L. Peabody, of New York; *Recorder*, Dr. James T. Whittaker, of Cincinnati; *Treasurer*, Dr. W. W. Johnson, of Washington; *Council*, Dr. William H. Draper, of New York; Dr. Robert T. Edes, of Boston; Dr. H. M. Lyman, of Chicago; Dr. Samuel C. Busey, of Washington; Dr. Frederick C. Shattuck, of Boston; Dr. William Osler, of Philadelphia; and Dr. W. W. Welch, of Baltimore.

The proposition with reference to the formation of the Congress of American Physicians and Surgeons was presented and approved. The following committee was appointed to confer with other organizations: Dr. William Pepper, Philadelphia; Dr. Robert T. Edes, Boston; Dr. R. P. Howard, Montreal; Dr. James T. Whittaker, Cincinnati; and Dr. Francis Delafield, New York.

COMPLIMENTARY DINNER TO PROFESSOR PANCOAST.—On the 17th instant a complimentary dinner was given to Professor William H. Pancoast, at the Hotel Bellevue, by his personal friends in the Alumni Association of Jefferson College and others of the medical profession of this city, at which law, divinity, and journalism were also represented. Dr. Addinell Hewson presided at the table, and Dr. Thomas H. Andrews was toast-master. A number of invited guests from distant cities were present, among whom were Dr. William Brodie, of Detroit, Michigan, ex-President of the American Medical Association; Dr. Traill Green, of Easton, Pennsylvania; Dr. Robert Neumann, of New York; Dr. A. N. Bell, of Brooklyn; Drs. George H. Rohé and J. W. Chambers, from Baltimore; and J. N. Quimby, of Jersey City. The entire number present was one hundred and sixty-two. The occasion was the retirement of Professor Pancoast from the Chair of Anatomy in the Jefferson College. In his remarks acknowledging the honor, the guest of the evening said that he had been connected with Jefferson College for twenty-seven years as Demonstrator, Assistant Professor, and member of the Faculty, and still cherished warm regard for an institution to which his father had been attached for many years before him. He announced that he had accepted the Chair of General Descriptive and Surgical Anatomy and Clinical Surgery in the Medico-Chirurgical College of Philadelphia, an institution which is working out the problem of higher medical education by establishing preliminary examinations and a three years' graded course. This College, he said, had just purchased a commodious property near the centre of the city, and when the alterations were completed the Philadelphia Dental College, the Charity Hospital, the Hospital for Skin-Diseases, and the School of Anatomy would unite with the Medico-Chirurgical Hospital and College in furthering the great and important work in which they are engaged.

Addresses were also made by Professor Henry H. Smith, J. P. Handy, J. McKeehan, Esq., Mr. Riggs, of Delaware, Prof. Garretson, and others.

It was announced that Dr. John V. Shoemaker had accepted the Chair of Dermatology, and Dr. E. E. Montgomery the Chair of Gynæcology, in the Medico-Chirurgical College. A number of addresses were made and the best spirit was manifested. The dinner was very successful, and there has been nothing like it in this city since the dinner given to Professor Gross upon the completion of his fifty-first year of active practice by the members of the profession in 1879.

THE MEDICAL SOCIETY OF THE STATE OF NEW JERSEY met at Sea Girt, New Jersey, June 8 and 9, 1886, in its One Hundred and Twentieth Annual Convention. Dr. Joseph Parrish, of Burlington, presided. He took for the topic of his annual address the "Geography of Malaria."

The following are the officers for 1886–87:

President, C. J. Kipp; Vice-Presidents, J. W. Ward, H. G. Taylor, and B. A. Watson; Corresponding Secretary, William Elmer; Recording Secretary, William Pierson; Treasurer, W. W. S. Phillips; Standing Committee, T. J. Smith, E. S. Marsh, D. C. English.

Next place of meeting, Beach Haven, New Jersey, in June, 1887.

On motion of Dr. Benjamin, the Society adopted the following motion:

"*Resolved*, That the Medical Society of the State of New Jersey recommends only such colleges as require preliminary examination and a three years' graded course of study."

A resolution was also adopted re-affirming the value of experimental research, and opposing attempts of Societies for the Prevention of Cruelty to Animals to restrict vivisection.

Dr. BENJAMIN H. BRIGGS, Selma, Alabama, writes that "Colden's Liquid Beef Tonic" is an excellent preparation, the composition of which is known, and one that physicians can intelligently prescribe. He has found it of great service in his practice.

NOTES AND QUERIES.

A NEW REMEDY FOR RHUS-POISONING.

MR. EDITOR,—As the warm weather approaches and a great number of the population are about to betake themselves to the rural districts, there will shortly appear the usual periodical cases of rhus-poisoning. Having been a sufferer myself, I desire to call the attention of the profession to a remedy which I have found very efficacious, and which in my hands has heretofore proved to be *the* remedy in every instance. Having tried almost everything recommended, with no avail, I finally applied a *saturated solution of oxalic acid*, which dried up the vesicles in less than an hour and prevented a further spread of the disease.

In practice I apply the solution with a camel's-hair brush, using extreme caution, when the eruption is on the face, to protect the eyes. I usually apply it a little beyond the margin of the affected part, thus preventing the trouble spreading.

THOMAS B. MCBRIDE, M.D.

2022 SUSQUEHANNA AVENUE.

A CORRECTION.

THE Secretary of the College of Physicians, Dr. Isaac Norris, Jr., writes that the censorship of papers proposed to be read has not yet been adopted by the College.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 6, 1886, TO JUNE 19, 1886.

MAJOR BLENCOWE E. FRYER, SURGEON.—Sick-leave of absence still further extended six months on surgeon's certificate of disability. S. O. 131, A. G. O., June 7, 1886.

MAJOR HENRY R. TILTON, SURGEON.—Ordered for duty as post-surgeon, Presidio of San Francisco, California. S. O. 38, Department of California, June 1, 1886.

MAJOR J. S. BILLINGS, SURGEON.—Granted two months' leave of absence, with permission to go beyond sea, to take effect July 9, 1886. S. O. 138, A. G. O., June 16, 1886.

MAJOR WILLIAM E. WATERS, SURGEON.—Ordered from Department of the East to Department of the Columbia.

CAPTAIN JAMES C. MERRILL, ASSISTANT-SURGEON.—Ordered from Columbus Barracks, Ohio, to Department of the Columbia, to take effect upon the expiration of his present leave of absence.

CAPTAIN SAMUEL Q. ROBINSON, ASSISTANT-SURGEON.—Ordered from Department of the Columbia to Department of Texas.

FIRST-LIEUTENANT WILLIAM O. OWEN, ASSISTANT-SURGEON.—Ordered from Department of the Columbia to Department of the East.
S. O. 133, A. G. O., June 10, 1886.

CAPTAIN J. V. LAUDERDALE, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon at Fort Concho, Texas. S. O. 70, Department of Texas, June 12, 1886.

CAPTAIN EDWARD T. COMEGYS, ASSISTANT SURGEON.—Ordered for duty as post-surgeon at Madison Barracks, Sackett's Harbor, New York. S. O. 60, Division of the Atlantic, June 15, 1886.

CAPTAIN W. F. CARTER, ASSISTANT-SURGEON.—Ordered for duty (temporary) at Fort Concho, Texas. Paragraph 2, S. O. 55, Department of Texas, c. s., granting Assistant-Surgeon Carter leave of absence for one month, is revoked. S. O. 64, Department of Texas, June 1, 1886.

FIRST-LIEUTENANT C. S. BLACK, ASSISTANT-SURGEON.—Ordered for duty at Fort Stockton, Texas. S. O. 64, Department of Texas, June 1, 1886.

FIRST-LIEUTENANT C. S. BLACK, ASSISTANT-SURGEON.—Ordered from Fort Stockton, Texas, to Fort Clark, Texas. S. O. 69, Department of Texas, June 11, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM JUNE 6, 1886, TO JUNE 19, 1886.

PASSED ASSISTANT-SURGEON R. SWAN.—Detached from "Brooklyn" and wait orders.

PASSED ASSISTANT-SURGEON P. A. LOVERING.—Detached from Navy Yard, New York, and ordered to "Brooklyn."

PASSED ASSISTANT-SURGEON GEORGE ARTHUR.—Ordered to Navy Yard, New York.

PASSED ASSISTANT-SURGEON C. W. RUSH.—Detached from the "Franklin" and ordered to the "Brooklyn."

SURGEON J. A. HAWKE.—Detached from the "Wabash" and ordered to the "Essex," July 1.

SURGEON HOWARD SMITH.—Ordered to the "Wabash."

LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDING JUNE 14, 1886.

PASSED ASSISTANT SURGEON F. W. MEAD.—Granted leave of absence for twenty days, June 9, 1886.

PASSED ASSISTANT-SURGEON JOHN GUITÉRAS.—Granted leave of absence for thirty days, June 14, 1886.

ASSISTANT-SURGEON R. B. WATKINS.—Granted leave of absence for thirty days, June 4, 1886.

ASSISTANT-SURGEON W. J. PETTUS.—To proceed to Charleston, South Carolina, for temporary duty, June 11, 1886.

PHILADELPHIA MEDICAL TIMES.

PHILADELPHIA, JULY 10, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE THERAPEUTICS OF NATURAL MINERAL WATERS, ESPECIALLY IN DISEASES OF WOMEN AND CHILDREN.

BY JOHN M. KEATING, M.D.,

Obstetrician to the Philadelphia Hospital, and Lecturer on Diseases of Women and Children; Physician to St. Joseph's Hospital; Surgeon to the Maternity Hospital, etc.

Reported by WILLIAM A. EDWARDS, M.D.

ON glancing over the list of subjects which present themselves, I find that there is none that offers a more attractive field for our consideration at present than the study of the application of the so-called natural mineral waters to the treatment of disease.

Thousands of dollars are spent yearly by our people going to the foreign spas: this to a great extent has become the fashion. It is important for us to ascertain why the mineral springs of America do not give the same good results as those of foreign lands. One reason for this is readily apparent to the medical mind: it is that mineral waters alone, like medication of any other kind alone, must be of comparatively little value. They require certain other conditions in order not only to produce an effect, but to make the effect lasting if any be obtained at all. So well recognized, indeed, is this fact in Europe that the most celebrated spas are entirely under government control, and—so important do they deem it that each case should receive the full amount of benefit—they jealously guard the precious water, allow it to be given out only on strictly scientific principles, regulate the diet and amount of exercise, and neither love nor money can make them deviate from their strict laws.

With us, on the contrary, our mineral springs are entirely under private control; the resorts are usually for fashion, the water is drunk without medical advice, unless specially desired,—which, by the way, is rarely obeyed. The patients may drink as much or as little as they please, and eat whatever they fancy; and, unfortunately, the character of the food and cooking is in many places anything but that best suited to the invalid's stomach. They may keep early or late hours as they see fit, take little or no exercise, except possibly dancing in an overheated, ill-ventilated room; while the men smoke and indulge in alcoholic stimulants to great excess. No wonder, then, that we hear that our mineral waters are of little account compared with the foreign waters, and also that analyses do not always give the actual therapeutic value of the water.

It is a great pity that the companies or individuals who are fortunate enough to possess a valuable spring, recognized as such by the medical profession, do not surround it with all those strict regulations that render foreign springs so efficacious.

There is no doubt that these natural mineral waters preserve for a long time their value; and, as it is impossible for us thus to surround our patients when away from home with the means that are calculated to make waters beneficial, we can put them under a course of treatment in their own homes under our supervision, and thereby gain the full benefit to be derived from a full and thorough course at the spas themselves. But here again we must bear in mind what an important factor fresh air is in these very diseases we are called upon to treat. Many of these springs are situated in a most beautiful mountain-region, where the time alone spent out of doors almost establishes a new lease of life. This benefit, of course, the patient cannot enjoy in our large cities.

Then, also, we must remember the great importance of drinking waters not medicated. We probably see this more thoroughly exemplified in the use of Poland water, which is largely used, yet which is noted for being the purest kind of spring water, without any medicinal qualities: its very purity is its recommendation. Truly Dr. Fowler says, he who stints himself in the drinking of water is dirty inside, and he tells us that we must drink between seventy and seventy-five ounces (almost five pints) of water in twenty-four hours in order to make up for the amount which is excreted by the lungs, skin, and kidneys, amounting to ninety ounces a day. With the solid food we get but about fifteen ounces.

We feel assured that very few persons at home drink as much as this; but if they go to the mineral springs and systemati-

cally drink five pints of water a day, breathe pure air, and lead a regular life, they will be much improved from disease caused by sedentary life or city habitation, independent of any mineral agent whatever in the water.

In regard to the use of mineral waters in diseases of women and children, I may quote a few sentences from my article on this subject in the *Archives of Pediatrics* for August 15, 1884.

Among the most valuable waters in children's practice are those containing the *alkaline alteratives*, as the carbonates and bicarbonates of sodium, potassium, magnesium, calcium, lithium, strontium, iron, and manganese. They are used in lithuria and acid dyspepsias, especially when there is gastric irritability the result of intestinal disorders: they increase the activity of the kidneys, and rarely, if ever, affect the bowels. Vichy may be objectionable to children on account of the carbonic acid gas which it contains: this may then be allowed to escape before the water is used. To very young children it may be administered diluted with milk. The water of the Capon Springs is probably the most reliable. It has been recommended for intestinal worms in children. Farmville lithia water and Buffalo lithia water, Spring No. 2, are in my experience, even in infants of the most tender age, very valuable waters. Especially have I found them valuable in the eruptive fevers where there is much thirst and scanty, high-colored urine. They can be administered *ad libitum*, or may be used to dilute the food. In cases where constipation is present, the *alkaline-saline* waters, as Saratoga seltzer, may be used. As alteratives, in scrofula for example, I have found the *saline waters* containing the chlorides of sodium, potassium, magnesium, calcium, iron, etc., extremely valuable: they stimulate the glandular and lymphatic systems, and increase the flow of bile. The Ballston Spring is a notable example of this class. It has a high percentage of mineral constituents, one hundred and thirty-five grains to the pint. In its percentage of carbonic acid, fifty-three cubic inches, it exceeds the saline waters of Homburg, Kissingen, Wiesbaden, and the Seltzers. It is further of value on account of its large proportion of carbonate of lithia, amounting to 0.701 of a grain.

In children's practice, the most valuable of this class is sea-water. Daily baths may be advised of from ten to fifteen minutes' duration: the water should be about blood-heat. When the sea-shore is beyond the reach of your patients, or during the winter months, the prepared salt can be obtained, which is almost as beneficial. One ounce to the quart of water would about represent sea-water. The St. Catharine's Spring of Canada is a remarkable alkaline-saline water, being particularly notable on account of the large amount of sodium, calcium, and magnesium chlorides which it contains. It represents four hundred and fifty grains of salts to the pint. This is more than three times the quantity contained in the brine-baths of Kreuznach in Prussia.

It will be necessary to expose the *sulphur waters* to the atmosphere before they will be acceptable to children: they are valuable on account of their contained sulphates. In syphilitic cases they may be used fresh for baths, on account of their sulphuretted hydrogen. The two Canadian springs, Charlottesville and Sandwich, are superior to the noted sulphur waters of Europe in the fact that they possess a much greater amount of sulphuretted hydrogen; the former containing more than 3, and the latter 4.72, cubic inches of this gas in the pint.

The *calci-sulphur waters*, containing the carbonate and sulphate of lime, are indicated in cases of rickets with inherited syphilis. The iodine springs, the Bath Sulphur Springs of West Virginia, would be useful in such cases. A few of these waters, as the Greenbrier White Sulphur Springs and the Yellow Sulphur Springs, the former in West Virginia, the latter in Virginia, contain a proportion of the purging sulphate which is appreciable. The *saline sulphur waters*, containing notable amounts of the chloride of sodium and the sulphate of soda and magnesia, are of course cathartic. They may be used internally in cases of obstinate constipation. An infant may be given a tablespoonful or two of Bedford water *ter die* with excellent effect: this water is alkaline and contains sulphate of magnesia. These waters are useful as an alterative in many cases. Probably the water of Sharon Springs is best for constant use. It is said that Indian parents often took their children who were affected with cu-

taneous diseases and dipped them in these waters. We see, then, that in cases of eczema, in the rheumatic diathesis, in cases where there is a syphilitic taint, the saline sulphur waters can be used for baths among children. In addition to those already noted, the following may be mentioned: the Lower Blue Lick, of Nicholas County, Kentucky, the Lafayette, the Indian Spring, the West Baden, the French Lick of Indiana, the Blount Springs of Alabama, Salt-Sulphur of Monroe County, West Virginia, and the Green Cove Springs of Florida.

To consider the *iron* or *chalybeate waters*, as represented by the Rawley Springs, of Rockingham County, Virginia, the Sweet Chalybeate, Alleghany County, Virginia, the Cooper's Well, Hinds County, Mississippi, and Cresson Springs, Cambria County, Pennsylvania, we find them valuable in cases of anæmia, chlorosis, passive hemorrhage, scrofula, chronic diarrhœa, and dropsy from kidney-disease with profound anæmia. We may add to the list the Ocean Springs of Mississippi and the Baily Springs of Alabama,—the former being also saline and the latter alkaline.

The *alum waters* which also contain iron are valuable in the scrofulous and tubercular diathesis. The Oak Orchard Acid Springs, of Genesee County, New York, contain ten grains of free sulphuric acid in the pint. They are useful in conditions of atonicity of the bowels without congestion of the mucous membrane, in relaxations of the mucous membrane, as in whooping-cough, or as a stimulant to that of the stomach following summer complaints.

They are very useful as baths, especially in discharges from the nose or ears, bone-scrofula, or eczema, and also for vaginal injections. The Rockbridge Alum Springs, Rockbridge County, Virginia, seem to fulfil these indications. The Bath Alum Springs of Virginia are probably the best, as they contain a large amount of iron.

The *calcic* or *calcareous* and *earthy waters* are of extreme value in the rickety diathesis. Of these we may especially note the Gettysburg Spring, in Adams County, Pennsylvania, and the Sweet, of Monroe County, West Virginia, whose temperature is 74° F. The Alleghany Springs, Montgomery County, Virginia, are also of much value: they are slightly purgative and somewhat diuretic. The Bethesda, Waukesha County, Wisconsin, is by many regarded as the most efficacious in the list. There can be no doubt of its value in cases of interstitial nephritis, albuminuria, and anasarca.

As regards the special cases in diseases of women, the value of water alone cannot be overestimated. What I have already said in regard to the use of pure water I would still further emphasize at this point. In almost all the cases of subacute disease that we are called upon to treat in women we can classify under three heads: those that are (1) gouty, (2) rheumatic, or (3) anæmic. It is out of the question to expect to be successful in treatment in gynæcic cases by simply making applications to mucous surfaces, or by the use of mechanical appliances to expect a permanent result without at all considering constitutional treatment.

The presence of uric acid in scanty, high-colored urine would undoubtedly lead us to recognize at once that our patient needs alkalies combined with large quantities of water, in order to overcome the uric-acid diathesis and its consequent portal and pelvic engorgement, which all our local therapeutics cannot relieve without constitutional treatment.

On the contrary, when we have the rheumatic diathesis, made evident by the patient's passing large amounts of phosphates and giving a history of marked loss of appetite and want of strength, leucorrhœa, pallor of mucous membranes, and functional want of tone in the digestive tract, accompanied by dyspepsias and neuralgias, we have in a marked degree the indications for the value of acids associated with chalybeate waters, or the additional use of sulphur waters should the serous membranes be in the least affected. In many cases where the oxalates alone are present, the indications for a mineral-acid treatment would also be marked.

As constipation forms one of the most important considerations in the treatment of diseases of women, and as most of the disorders that are attended by this condition have also associated as symptoms leucorrhœa, disordered menstruation, and migraine, the *saline sulphur* waters are especially indicated for such cases; and possibly after the patient has gone through a thorough course of this kind it may be well to change to the chalybeate waters for their tonic effect.

The employment of the various waters

used as general or local baths in diseases of women also demands attention. The Hot Springs of Garland County, Arkansas, whose temperature is from 93° to 150° F., are of extreme value in skin-diseases and in functional uterine disorders and congestions. In neuralgia, hepatic derangements, and rheumatic manifestations, the springs in Bath County, Virginia, are very efficacious: the temperature here is about 110° F.

In scrofulosis, ophthalmia, leucorrhœa, chronic diarrhœa and dysentery, the Healing Springs, Bath County, Virginia, at a temperature of 88° F., are worthy of consideration.

It will not be necessary for me to detain you further than to endeavor to impress upon you the desirability of placing, by using proper discrimination in the selection of cases, the therapeusis of natural mineral waters upon an eminently scientific basis.

ORIGINAL COMMUNICATIONS.

REVIEW OF THE PROGRESS OF MEDICAL AND SURGICAL ELECTRICITY.

BY WILLIAM R. D. BLACKWOOD, M.D.,
Neurologist and Electrician to the Presbyterian Hospital.

ELECTRICITY IN FEVERS.

PROFESSOR DE RENZI narrates his experience with faradic currents in various febrile conditions (*Gazz. Med. Ital.-Lombard.*). His attention was drawn to the method accidentally some years ago in a case of quartan intermittent, which gave way to electricity. His conclusions, after many experiments, are: 1. Miasmatic fevers are much more readily checked by treatment than the symptomatic fever of bronchial catarrh, pulmonary tuberculosis, progressive pernicious anæmia, etc. 2. During the application of the current the temperature is augmented, sometimes several tenths of a degree; soon thereafter it falls, even as much as 2½° C. 3. The better method of application is one pole in the hand, the other brushed over the body. 4. The arterial pressure is increased during the séance; the skin reddens, perspiration is freely induced, and the pulse increases in volume. He believes the antithermic action of electricity to be due to increased activity of circulation in the cutaneous capillaries, caloric thus freely escaping.

In a paper* giving my experience up to that time, I gave the results of purely electrical treatment in thirty cases of intermittent fever, all of which were cured. Since then I have made experiments in eighteen additional cases, each of which also recovered without drugs.

In a case of typhoid fever with continued high temperature (typho-malarial of Woodward) in my own family, during seven weeks' duration (including a relapse at the fourth week) I have carefully experimented with a view to determine so far as possible the exact value of electricity in reducing temperature in the disease named. The results are here given for the sixteenth and eighteenth days, which represent closely the general result of many trials. One pole to solar plexus, the other labile in general electrization.

Sixteenth Day.

	Temperature.		Pulse.	
	Before Faradism.	After Faradism.	Before Faradism.	After Faradism.
8.00 A.M.	101.6°		98	
8.10 A.M.		101.0°		98
9.00 A.M.	102.8°		100	
9.10 A.M.		101.5°		96
10.00 A.M.	103.0°		112	
10.10 A.M.		102.8°		98
3.00 P.M.	103.2°		104	
3.10 P.M.		103.0°		100
4.00 P.M.	104.2°		110	
4.10 P.M.		103.4°		104
5.00 P.M.	104.6°		118	
5.10 P.M.		103.2°		104

The pulse was slowed, steadied, and its volume decidedly increased.

Eighteenth Day.

	Temperature.		Pulse.	
	Before Galvanism.	After Galvan.	Before Galvan.	After Galvan.
8.00 A.M.	102.4°		100	
8.10 A.M.		102.2°		100
9.00 A.M.	103.6°		106	
9.10 A.M.		103.2°		104
10.00 A.M.	104.8°		110	
10.10 A.M.		104.6°		108
3.00 P.M.	103.4°		106	
3.10 P.M.		103.4°		106
4.00 P.M.	104.2°		110	
4.10 P.M.		103.8°		108
5.00 P.M.	104.8°		120	
5.10 P.M.		104.6°		118

Pulse steadier, not much more volume, and little slowed.

The general result throughout was in favor of faradism. No temporary eleva-

* Medical Bulletin, November and December Nos., 1863.

tion of temperature noted as described by De Renzi under either current.

THE DIRECT ELECTRIZATION OF THE HEART.

Dr. J. Leonard Corning believes that the direct galvanic current assures good results in angina pectoris. In cardiac tremor due to excesses, in conditions characterized by irregular or intermittent action, he finds faradism useful. His plan is as follows. First, the pharynx is brushed or sprayed with an eight-per-cent. solution of cocaine. After evidence that reflex nausea is abolished so as to permit the introduction of an instrument well down the tube, he passes an œsophageal rheophore, which is insulated all except an inch and a half at the point, until the extremity lies between the seventh and ninth dorsal vertebræ, which insures the close application behind the heart. Accurate measurement as to length he obtains by placing the tip of the instrument on the eighth dorsal spinous process, and finding by a rule the distance to the mouth. A round disk is fastened to the rheophore at the proper place in front of the mouth, and this prevents it from passing too far. Connection is now made with the battery, and the other pole applied by a flat sponge over the anterior cardiac region. No details are given as to the amount of current used, and we think extreme caution should be observed in any case, for a too careless diagnosis may be made, the phrenic may be unduly influenced, and, moreover, as the action of the heart is readily checked by electricity in systole under strong currents, less risky means are available.

ELECTRICITY IN GYNÆCOLOGY.

Dr. A. D. Rockwell, of New York, in a paper on the galvanic current in chronic pelvic cellulitis, states that "while electricity as a therapeutic agent undoubtedly finds its widest field in neurological cases, yet it is by no means to be restricted to these conditions. In every special department of medicine it must at times enter as an important factor, and if both general practitioner and specialist would keep abreast the current, they must recognize this fact. Ophthalmology, laryngology, dermatology, and obstetrics even own its value; but it is in gynæcology that its greatest efficacy lies.

"I have for years held that it should occupy a far higher place in the armamentarium of the gynæcologist than it has yet occupied, and have occasionally given such testimony as I could concerning its efficacy in the disorders of menstruation, in super- and sub-involution of the uterus, in uterine morbid growths, and in certain ovarian affections. Until gynæcological experts more generally, however, give the subject their personal attention, make themselves familiar with the physics and physiology of electricity, study the differential indications for its use, and finally supplement theoretical knowledge by practical work, the popularization of this invaluable remedy for the diseases of women will be slow.

"In the sequelæ of pelvic cellulitis especially, the application of the galvanic current is not infrequently followed by the most satisfactory results. For the absorption of old exudations in other parts of the body this form of electricity has long been known to be the most efficacious, but only within a comparatively recent period has it been tested in the thickening and infiltration resulting from inflammation of the pelvic cellular tissue. The negative pole, consisting of a metal ball, or in some cases, better still, of a concave metal clasp, is to be used internally and directly to the part affected, while the positive is to be applied externally. If the metal electrode is applied without the intervention of a sponge or chamois covering, care should be taken not to use currents sufficiently strong to produce eschars. This mishap may occur even without the knowledge of the patient at the time, and in the beginning it is perhaps safer to use a covered electrode. I have seen this treatment, judiciously and persistently carried out, result not only in the absorption of large pelvic deposits, but in the cure of the most severe and obstinate sciatica, and in the restoration of power to partially-paralyzed limbs. In such cases both sciatica and paralysis are caused undoubtedly by pressure of the exudations upon the pelvic floor, and can be relieved only through the dissipation of the morbid products."

Whilst it is undoubtedly true that the *exudation* as the prime cause of paralysis through pressure is removable by galvanism, we have found induction currents more serviceable in awakening muscular action after the exudate was removed. In a case where galvanism had failed almost completely to develop the wasted muscles

after long confinement to bed, with forced feeding and massage, static electricity achieved a complete cure in a few weeks. The improvement was perceptible from the first treatment.

Dr. Landis, from a series of experiments, believes that in extra-uterine pregnancy the current should be maintained an hour, if possible; that it should be repeated at short intervals; that it should be used at the utmost bearable strength during at least one sitting; that it probably acts upon the placental circulation besides destroying the fœtus.—*London Medical Record*, May 18, 1886.

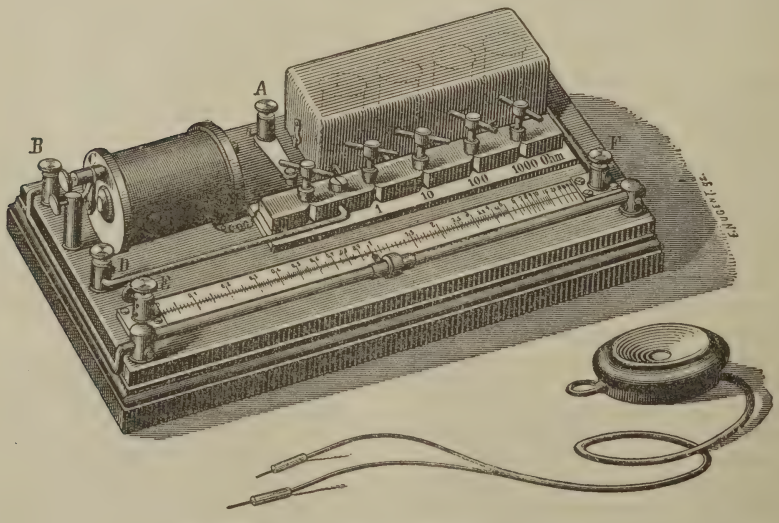
In a case which my friend Dr. Cooper, of Westfield, New Jersey, called on me to treat in June of this year, I used the faradic current for two hours at its utmost bearable strength, with an intermission of less than five minutes midway. The galvanic current from a thirty-two-cell Barrett chloride-of-silver battery was then employed for fifteen minutes, with interruptions at ten-seconds' intervals and reversions every sixty seconds. The pregnancy was right tubal, and rupture was imminent. The lady is rapidly recovering her usual health, and, this being the fifth case personally treated, in the last three of which a single prolonged and powerful sitting was successfully employed, I cannot see why detached applications are indicated, as advocated by Dr. Landis and others.

Mr. Lawson Tait, of Birmingham, England, has written to Dr. Harris, of this city, decrying electricity in extra-uterine pregnancy; but the tenor of his communication shows him to be wholly ignorant of the subject, and his enthusiasm for exploratory laparotomy in all conceivable conditions has evidently run away with his judgment. Dr. Harris has very satisfactorily answered Dr. Tait's strictures before the Obstetrical Society, to which he read the document.

MEASUREMENT OF INDUCTION-CURRENTS.

The idea that induction-currents or the resistance to them in the body cannot be measured is erroneous. More than one method is available, and attention has been drawn to this fact by Dr. Stone, Physician to St. Thomas's Hospital (London), in a series of Lumleian lectures on "The Electrical Condition of the Human Body: Man as a Conductor and Electrolyte." The most available instruments for this purpose are Hartmann's unifilar dynamometer, which Dr. Stone employed, and Kohlrausch's combined meter-bridge and induction-coil. When the resistance in the circuit through the human body, the Kohlrausch apparatus being employed, is balanced by an equal resistance through the bridge in derivation, the telephone (substituting the galvanometer) becomes silent. The Universal Rheometer is here shown. (Fig. 1.)

FIG. 1.

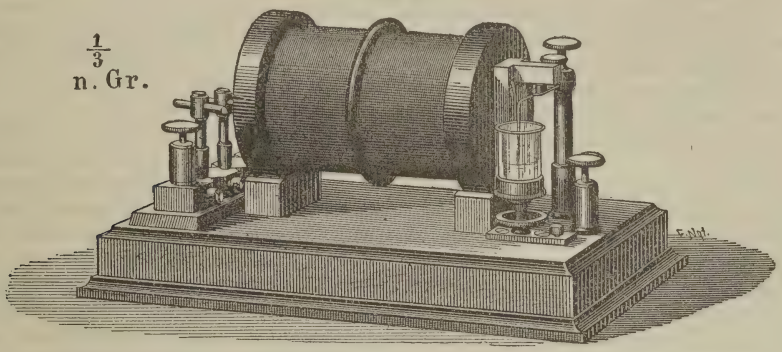


PROFESSOR KOHLRAUSCH'S UNIVERSAL RHEOMETER.

A curious fact established by this experiment is that the resistance to faradism is only one-half that of galvanism. Dr. Stone made it as 600 ohms to 1160. In my hands, the unit, on an average of twenty different individuals, is 1240 (galvanic) to 588 (faradic). Static resistance (Queen's Toepler-Holtz) is 245 ohms only. Equal alternating currents were developed by the Kohlrausch induction-apparatus here illustrated. (Fig. 2.)

Dr. Stone's study demonstrates the truth that the human body is more permeable to high tension than to quantity currents, and, from my association with electro-therapeutists in discussing the matter, this will be possibly a surprise to them.

Fig. 2.



Professor Kohlrausch's Induction-Apparatus as Excitor of Alternating Currents.

FARADISM IN SPASMODIC ASTHMA.

Dr. E. Paget Thurstan, of Southborough (Tunbridge Wells), relates at length the case of a coachman who suffered severely from sudden attacks of asthma from exposure in his occupation, and in whom the ordinary remedies failed. He obtained temporary relief from a nostrum, the proprietor of which lost no time in securing a certificate. On the return of the trouble, Dr. Thurstan employed electricity by bipolar faradism of the phrenics, and in a month decided relief was attained. The case seems to have been one of reflex spasm in a gouty subject, and is interesting in showing persistence of a purely functional disturbance for many months. —*British Medical Journal.*

In a case of asthma treated by myself with iodides, lobelia, and so on for a long time with only temporary benefit, the patient drifted from me and finally fell into the hands of an empiric, who relieved him very decidedly under electricity, probably faradism. His greed, however, lost him the case, and, returning to me, on his report as above and through his persuasion, I tried galvanism thoroughly, to no purpose. Faradism cured him in six weeks, and he has remained well for five years. The current was passed by a divided rheophore to the submaxillary fossa, the other to the epigastrium for ten minutes, and then labile over the thorax, front, sides, and back, for ten or fifteen minutes additionally.

I have used electricity in a good many other cases, and usually with good effect. The benefit was temporary only in most of them, and none were actually cured by the current alone. Faradism always aborted or shortened an attack when used promptly at its outset, and one patient invariably checked the violence of his attack so much as to make him indifferent to it when the battery was at hand.

FARADISM IN SINGULTUS.

In several instances severe attacks of hiccough have ceased under faradism applied as described for asthma. In one instance the person was greatly prostrated from the persistence of the attack for five days before I saw him.

In a case of constant vomiting following hiccough, faradism promptly succeeded. The singultus stopped when the emesis commenced, and many drugs were tried in vain. A current strong enough to cause considerable discomfort was required.

GALVANISM AS AN AID IN COCAINIZATION.

Dr. Wagner (*Wiener Med. Presse*, 1886, No. 7; *Breslauer Arztl. Zeitschr.*, February 27, 1886) has sought to make use of

the fact that the galvanic current favors the movement of fluids present in porous conductors, in the direction from the anode towards the cathode, to facilitate anæsthetization with cocaine. He used a large anodal electrode covered with flannel wet with a cocaine solution, applied to the part to be anæsthetized. In a few minutes the skin was observed to be anæsthetic, and it was found that the degree of anæsthesia depended upon the concentration of the current. It does not appear that the method has yet been turned to practical account.

It does not appear how much credit is due here to the current itself, and it is possible that if the surgical procedures following the anæsthetization are not specially painful or prolonged, the good result was largely if not altogether due to the galvanism, for abundant testimony is available on this point.

ELECTRICITY IN MUSCLE-CRAMP.

Dr. Adolph Wahltuch recently called the attention of the Manchester Central Medical Society to the case of a young lady who presented painful cramp of the left pectoralis, deltoid, and biceps muscles, and weakness of the right wrist, which prevented her from holding the bow in violin-playing, in which she was an expert. The case resembled the ordinary writer's cramp. At first faradism gave little good result. Galvanism then (twenty-five milliampères), three or four times a week, removed the difficulty in less than a month. She was directed thereafter to practise painting, writing, lawn-tennis, etc., that the chest-muscles should be exercised, and gradually she resumed her violin-playing. No case of writer's cramp, or of type-setter's, or of the common nocturnal cramp of the calf-muscles, has resisted galvanism with me, although failures are reported elsewhere.

STATIC ELECTRICITY IN AMBLYOPIA.

The Barcelona *Ophthalmic Bulletin* contains an account by Don Luis Barraquer of some very satisfactory results he has obtained by employing static electricity produced by Carré's machine in cases of amblyopia due to nicotism and to hysteria. He has made use of galvanism (one to two milliampères) also, but he finds that static electricity will often succeed where galvanism fails. Care must be taken first to test the susceptibility of the patient by a cautious use of the machine, as in some women a hysterical attack is sometimes induced by a sudden strong application of static electricity. In one case, where the subject was a man aged 48, and the cause excessive smoking, the vision was, when the first examination took place, only 0.1. By means of two sittings with galvanic treatment this was raised to 0.2. Static electricity was then substituted, and after several sittings the vision became normal.

In the case of writers who either do not yet need or who will not use glasses, and who consequently suffer from eye-strain, it is known that mild galvanic applications will act as a soothing agent when the victim is unable to stop his work at the proper time; but from repeated experiments we have found the so-called "secondary current" from the Toepler-Holtz machine (Queen's model)* to replace very satisfactorily the constant current. The rods must be separated only an eighth of an inch, if not provided with the adjustment (Richardson's) mentioned in our last review.

STATIC ELECTRICITY IN GENITO-URINARY CASES.

In nocturnal incontinence of children not dependent upon glans-irritation by elongated or adherent prepuce, a number of cases have been benefited by sharp static applications to the spine and perineum, no other remedy being used. Probably a strong mental impression is thus made; but, at any rate, the procedure is successful enough to render it worth trying, and many children are rebellious under liberal internal dosing.

In a case of priapism in a young man which resisted camphor, lupulin, etc., by myself and other means by the sufferer, a single, but strong, dose of static electricity finally terminated the difficulty.

In several instances static "secondary" applications have been serviceable in painful contraction of the cremaster muscles and scrotal neuralgia. Many celibates appear to suffer from this at times quite painful disorder, and in some of them warm baths and other ordinary remedies fail or are slow to act; and, having succeeded as above stated, the hint is given to those who possess a static machine.

* 924 Chestnut Street, Philadelphia.

ELECTRICITY IN SKIN-DISEASES.

Dr. G. T. Jackson has given a series of cases of varying type in which he finds galvanism efficacious. He has cured some troublesome instances of alopecia areata, one pole being placed on an indifferent point, the other on the spot affected. After half a dozen applications the hair grows steadily, and relapses are uncommon, which is an advantage, as topical remedies are apt to lose their power unless frequently changed.

Dr. Bach, of Milwaukee, writes to the *Therapeutic Gazette* on the removal of superfluous hair by electrolysis. He maintains + at the nape of the neck, and applies — through ordinary sewing-needles to the follicle, the rheophore having an interrupter in its handle. He does not stop to extract the hairs until fifty or more are loosened, and we imagine this to be no improvement, because the hair is certainly more readily withdrawn as soon as frothing occurs in our experience, and the operator is apt to puncture each follicle more than once if the redness provoked is not decided enough to mark each point. The doctor is to be congratulated in having extracted three hundred hairs at one sitting, with very slight reaction. We rarely attack more than thirty at once, and it seems better to extract them not in adjacent bunches, but at a little distance apart, the burning usually felt being thus less concentrated, and the cosmetic effect more endurable to sensitive ladies. We also prefer a needle of platinum and iridium, as less easily rusted than steel, and not so readily broken in nervous patients.

In one lady Dr. Bach removed over two thousand hairs, a formidable moustache, and after seven months she remains in excellent condition.

ELECTROLYSIS IN KELOID AND HYPERTROPHIED SCARS.

Professor Hardaway, of St. Louis, notes in this journal (May 29) his success in treating these affections, and confirming what has been previously reported in our reviews on the subject.

GALVANO-PUNCTURE IN ANEURISM.

Dr. Saboia has presented to the Imperial Brazilian Academy of Medicine the notes in a case of right subclavian aneurism in a man of 30. The tumor was the size of an egg, bounded on the inner side by the sterno-mastoid, below by the clavicle, and outwardly by the trapezius. There was no difference between the volume of the carotids, but the radial pulse was full, strong, and vibrating on the left side, while that of the right was small, filiform, and hardly perceptible. Two needles were plunged into the sac and connected with the positive of fourteen Gaiffe elements; the negative was placed on the trunk. Thirty-five minutes elapsed before the tumor became tense and ceased pulsating. One sitting cured the patient.

GALVANO-CAUTERY IN NASAL AFFECTIONS.

Dr. A. Cartaz (*La France Médicale*) describes a case in which spasm and facial pallor was provoked by irritation of the inferior turbinated body, which was hypertrophied (erected?). An ulcer was finally detected and destroyed under cocaine by silver nitrate. The sneezing and coughing continuing, he scarified the body by linear galvano-cauterization, and a cure resulted.

Dr. Theodore Hering, of Warsaw (*Annales des Maladies de l'Oreille, du Larynx, etc.*, February and March, 1886), in a long article, confirms Hack's observations on reflex neuroses, and gives cases treated by galvano-cautery with success, including linear scarification and removal of polypi by the heated loop. He does not use heroic measures, but relies on reduction of thickened mucous membrane alone.

GALVANO-CAUTERY IN PROSTATIC AND BLADDER DISEASE.

Dr. Newman, of New York, demonstrated before the American Medical Association at its late session his "galvano-cautery sound," which consists of a metal catheter with a platinum loop in a fenestrum at the end of the curve. The instrument is introduced into the bladder, its loop held against the prostate, and the cautery heated for an instant only. The potential is fixed before introduction, and cannot be exceeded. Failure cannot, it is claimed, happen. A repetition at short intervals produces shrinking of the gland. There is little or no pain, the patient is able to attend to his occupation, and no hemorrhage has ever as yet occurred.

Electrolysis in urethral stricture has been largely studied by Drs. Steavenson and Bruce Clarke, of London, who made a very favorable report on the subject before the Royal Medical and Chirurgical Society on May 25, a full report of which

may be found in the *British Medical Journal* of May 29. Their results fully endorse and support the claims made for electrical treatment, particularly in this country, of stricture of whatever character. Personally, we find electrolysis preferably applicable not only to urethral, but equally so to cervical contraction and rigidity of the uterus, and this notably so in flexions so commonly found in association with dysmenorrhœa.

IMPROVED AND NEW MECHANISM.

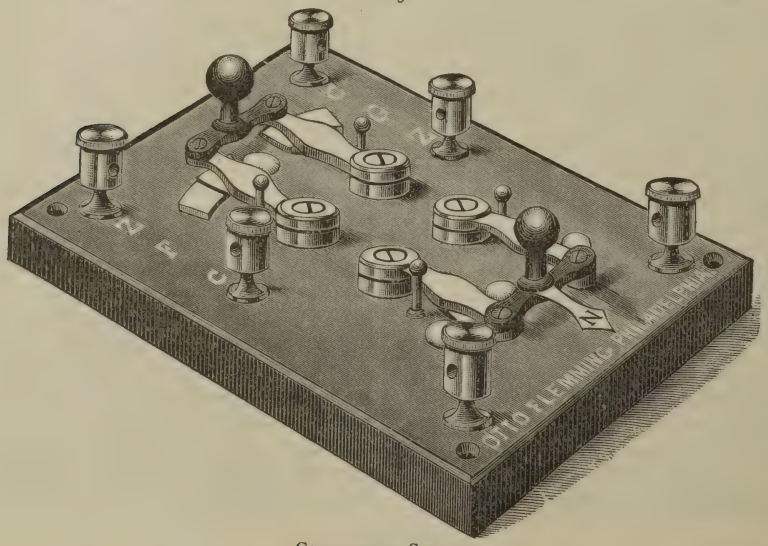
Galvano-Thermic Excitor.—A pair of concentric tubes sliding within each other and forming a pile, with the poles so disposed as to prevent diffusion of the current except as required, has been produced by M. Boudet, of Paris. It is, of course, intended only to act locally. In a case, for instance, of intestinal obstruction, it was employed by passing a hollow mandril through which a sound is inserted per rectum. A saline solution is injected through the sound, which conducts negative electricity to those portions of the bowel reached by the liquid. The positive disk is placed upon the dorsal or abdominal region, and the *excitateur galvano-thermique* is thus used as a stimulator of the intestinal muscle.—*London Medical Record*, January 15, 1886.

Pole-Changing Rheophore-Handle.—Dr. Granville Faught, of this city, has devised an ingenious instrument which dispenses with reversing switches operated manually or by pedal, thus giving the operator more liberty in applications requiring close attention. The handle contains three conducting wires, two of which run to the battery and one to the other rheophore. A simple pressure of the finger on a button on the side of the handle alters the relation of the concealed wires to each other and reverses the current-direction. The mechanism retains the adjustment as desired, and the reversion is produced without shock. The device is one of those apparently simple affairs which might attract little notice, but it is a great improvement in the interest of the busy practitioner.

Combination Switch.—Mr. Otto Fleming, of this city, has devised an exceedingly useful switch (Fig. 3), by which either current, or the galvanic and faradic combined, can be applied, and reversals or interruptions arranged by simple and convenient movements. In conjunction with his pendulum-interrupter, this device is an advance long needed, and it should find a place on all key-boards aiming to be complete.

Chloride-of-Silver Cells.—Continued use of the Barrett battery referred to some months since has detected no defect such as has been urged against this system. The opinion of De Watteville, whom as an electro-therapeutist none excel and few equal, led me to employ the cells in question, and thorough experiment shows them to be all that has been claimed.

Fig. 3.



Combination Switch.

ON UNRECOGNIZED ASYMMETRY OF THE LOWER LIMBS AS A CAUSE OF LATERAL SPINAL CURVATURE, ATTENDED BY SYMPTOMS INDICATING DISEASE OF THE VERTEBRÆ.

Read before the Philadelphia Academy of Surgery, June 7, 1886,

BY THOMAS G. MORTON, M.D.,
Fellow of the Academy.

I VENTURE to bring to your attention this evening several cases which illustrate the condition of lateral spinal curvature, with symptoms of a more or less severe nature, produced by inequality in the lengths or asymmetry of the lower limbs. The defect of development producing the want of symmetry, if not early recognized and properly corrected, is liable to impair the general health, and in time may induce changes in the vertebral column, with permanent deformity. At first the spinal curvature is accommodative, and is simply due to adjustment incident to the asymmetry of the torn limb, and if the defect of symmetry is recognized sufficiently early it is readily and entirely corrected. Defects of symmetry are seen in all parts of the body; this has been especially observed in the face, the ears, and the chest; but the most marked dissimilarity is usually seen in the lower limbs, where asymmetry is the rule rather than the exception.

The discovery of the almost constant existence of asymmetry in the lengths of the lower limbs dates back but a few years. In 1873, during my term of service in the Pennsylvania Hospital, I had under my care an adult with simple fracture of the femur. After his recovery I found, on careful measurement, that the injured limb was an inch longer than the other one. This seemed puzzling at first, but I at once suspected the cause. My hospital resident, Dr. Wm. C. Cox, now of Easton, Pennsylvania, who had previously had his attention drawn to the subject, undertook numerous measurements, not only of those who had fractured limbs, but those who never had any injury. The results of these measurements were published in a paper by Dr. Cox in the *American Journal of the Medical Sciences* for April, 1875. The variations in the lengths of limbs were found to range from one-eighth of an inch to seven-eighths. In fifty-four persons examined, only six showed the lower limbs equal in length.

Subsequently, in December, 1879, I examined a number of boys between the ages of eight and eighteen at the Girard College, Philadelphia, and found among five hundred and thirteen boys two hundred and seventy-two presenting inequality in the lengths of the lower limbs. In two hundred and forty-one there was no appreciable difference in length. In one case there was a shortening in the right limb of three and one-quarter inches: this lad had, we found, suffered from a fracture of the thigh some years previously.

Each boy was interrogated with reference to previous injury, whether he had at any time had a fracture, or any bone- or joint-disease which might have accounted for the defect of symmetry, but the reply in every case was in the negative.

The following results were obtained:

91	showed	a difference of	1/8	of an inch.
100	"	"	1/4	"
41	"	"	3/8	"
22	"	"	1/2	"
12	"	"	5/8	"
2	"	"	3/4	"
2	"	"	1 1/8	inches.
1	"	"	1 5/8	"

The right limb was found longer in one hundred and ninety-eight of the two hundred and seventy-two cases examined. None of the boys, including those who exhibited the greatest shortening, were aware of the fact that one limb was deficient in length, although in nearly every instance an examination of the trousers-legs showed that they were much more worn at the heel on one side than on the other, and this condition at least had been recognized by the individual.

The fact that asymmetry in the lengths of the lower limbs may be looked upon as the rule, and not the exception, has been the means of settling at least one medico-legal case.

In 1878 a suit for malpractice was tried before Judge Junkin, in New Bloomfield, Perry County, Pennsylvania. In this case an action for damages had been brought against a medical man of that place, who had treated a child aged 8 years for a fracture of the thigh, and, on recovery, the injured limb was found to be five-eighths of an inch shorter than the other. It was claimed that the boy was irretrievably ruined, although for a year he apparently had had perfect use of the limb.

During the trial the question of asym-

metry prior to the fracture in a limb already shorter than its fellow was discussed. This led the medical experts—Drs. Agnew and Hunt, who were present—to measure the limbs of a lad of twelve years of age who happened to be present in the court: the result showed a difference in this case of three-eighths of an inch. The presentation of this fact to the court led to a nonsuit.

It is not always possible to determine if these inequalities are congenital or acquired; probably most of the slighter, and even some of the more marked, inequalities are congenital; but a careful investigation of the histories of the subjects of the more marked defects which have come under my observation induces me to entertain the belief that they are more frequently the result of infantile palsies, possibly overlooked or unsuspected. In many cases where an accurate history was obtained, the occurrence of some disease of the nervous system in early life has been revealed.

When there is no difference of circumference between the two limbs, yet a difference in their lengths, the defect is probably congenital or due to premature ossification of articulation-cartilages.

Disease of the nervous system in intra-uterine life will give rise to arrest of development and variation in the length of limbs, for it is from this fruitful cause that we have all the varieties of congenital talipes.

The arrest of growth (which always takes place) in the course of an attack of infantile paralysis causes a permanent injury to the limb, which is seen in the atrophy which follows, and which is more or less marked according to the severity and duration of the attack and the stage of infantile or of fœtal development when it makes its appearance. If the disease has been confined to one limb, or more marked in one than in the other, a variation in the growth is sure to be observed, and is commonly permanent.

In cases where the entire spinal cord on one side is involved, the pathological changes (and atrophy) involve all the structures, soft and hard, of the entire side so affected: this is to be seen in the face and chest and breasts, in the diminished size of fingers and hand, as well as in the length of the feet and limbs. The parts so injured by the disease never regain more than a portion of what has been lost, and never attain the volume of the uninjured side.

It is difficult to understand why, in some instances of marked inequality in the lengths of the lower limbs, symptoms of such serious character should be complained of, while in other cases this defect should not give rise to any symptoms of spinal trouble, or, if any, so slight as to escape the notice of the individual.

It is probable that the bodies of the vertebræ in some are less yielding, more dense and stronger, than in other individuals, where possibly struma has interfered with the nutrition of the vertebræ so that they offer less resistance to the unequal pressure.

Observation of the following cases has suggested to my mind the propriety, in all cases where there is continued backache and pelvic distress, especially among females, of examining the spine; the limbs should also be carefully examined, to discover asymmetrical development. Such a course will clear up the diagnoses in many cases of supposed uterine complaints.

CASE I.—SPINAL CURVATURE, WITH PARTIAL ROTATION OF THE VERTEBRÆ, THE RESULT OF UNRECOGNIZED ASYMMETRY IN THE LENGTHS OF THE LOWER LIMBS.

On March 3, 1886, I exhibited to the Fellows of the College of Physicians a case of lateral spinal curvature, the result of unrecognized asymmetry in the lower limbs. The history of the case was briefly as follows:

A. H. F., aged 24 years, living in Wyoming County, a student of medicine, was a puny boy until about fifteen years of age, when he grew in fifteen months to his present height, five feet eleven inches. He had never been sick, except ordinary ailments of early childhood; has had more or less continued backache, which usually was relieved by a recumbent position. One year previously the diagnosis was made of necrosis of the lower dorsal and lumbar vertebræ, but no examination, so far as I can learn, was ever made of the condition of the lower limbs. By direction of his physician, a plaster jacket was applied a year ago, and worn for four months.

On examination I found a very marked lateral curvature, which was in no wise improved by former treatment, neither had the spinal pain been at all relieved; indeed, a gradual increase of suffering had induced the patient to come to this city for further advice and treatment. When he stood divested of his clothing, I not only found a decided lateral curvature, but also at once discovered a very marked variation in the lengths of the limbs.

Careful measurement showed that the right limb was an inch and seven-eighths shorter than the left. It was found that when the short limb was sufficiently elevated by a block, to a considerable extent the spinal curvature was removed, although not entirely overcome, for a certain amount of permanent rotation of the bodies of the vertebræ had taken place during the five years which he had been suffering; this, with possibly some absorption of the intervertebral substance and rounding of the vertebræ, had caused a certain amount of deformity, with spinal rigidity.

The patient was ordered a heel and sole of proper elevation, and to support the slight uncorrected curvature a spinal brace was applied. Immediately after the rectification of the length of the limb, the backache and loin-pains and most of the sciatic neuralgia and general uneasiness disappeared.

Some two months later, during a chance visit made to Bradford County, I met this patient, whom I found in excellent physical condition and free from pain and former spinal symptoms.

Neither this patient nor any of his medical attendants had ever suspected that there was any difference in the lengths of his limbs. The well-marked spinal rigidity, with the pains, had suggested the existence of possible bone-disease; such, however, was not the case: the further history settled this very satisfactorily and positively. When considerable spinal deviation or lateral curvature occurs,—which must be the case when the inequality amounts to an inch or more,—the bodies of the vertebræ, as already stated, become rotated, and this, with other changes incident to unequal pressure, induces a deformity in many cases which is to a great extent irremediable.

Dr. Agnew tells me that he has a number of specimens which well illustrate this pathological condition, impairing to a greater or less extent the usual mobility of the spine.

CASE II.—SPINAL CURVATURE WITHOUT PERMANENT DEFORMITY, RESULTING FROM UNRECOGNIZED ASYMMETRY OF THE LOWER LIMBS.

W. F. W., aged 17, born in Philadelphia. For a long time he had considerable pain around his waist and back, which was more marked during and after any exercise; the pain he described as a tiresome ache, which was only relieved by lying down. When two years of age he had an attack of measles, and for a year was partially paralyzed on left side; he gradually overcame this, and now has nearly as good use of this limb as the sound one; while walking he could feel that he had a rather one-sided movement. Measurements showed that the right calf measured in circumference fourteen inches, the left one twelve inches, the right thigh seventeen and one-half inches, the left thigh sixteen and one-fourth inches; in fact, the entire left side presented a moderate degree of atrophy as a result of the paralysis during early life. The right arm measured nine and three-quarters inches, the left arm nine inches. The left limb was one inch shorter than the right, and the left foot likewise showed diminished length of one inch as compared with its fellow.

The unequal length of the left side has been made up by a corresponding height of heel and sole, and since this has been adjusted he has been entirely free from all pain and walks without the slightest lameness: he has, however, the usual difficulty in bending the body to reach the floor.

CASE III.—LATERAL CURVATURE WITH SPINAL PAINS FROM UNRECOGNIZED ASYMMETRY OF THE LOWER LIMBS.

W. M. J. S., born in Philadelphia, aged 25, consulted me early in the winter for severe and continued backache; this commenced more than a year ago, and has been a source of great discomfort ever since. About twenty years ago he had an abscess near the right ankle, which he completely recovered from, but again five years ago he had a return of this trouble, and at the same locality, which, however, soon yielded to treatment. There is no evidence that the bone was ever involved in the disease, for no exfoliation of bone has ever occurred.

The pain which this patient had was not confined to the back, but it extended to the right hip and side. When he would attempt to straighten up and stretch his back, he would experience a cramp-like feeling; the pain at times extended to the scrotum. In every other respect his general health had been excellent, and there was no history of any strumous disease. He had in bending over considerable stiffness in the back,—a similar condition to that observed in many of these cases where the curvature of accommodation has continued for a length of time.

The measurements of the limbs were as follows. The right calf measured eleven inches, the left calf thirteen inches, the right arm ten inches, the left arm ten and one-half inches. The right limb was short one and five-eighths inches.

Elevation of the foot by a thick-soled shoe to the amount of the shortening overcame all spinal deformity and allowed him to walk without lameness, and the pain entirely disappeared. He has worn the new shoe now two months.

Considering all that has been published in regard to asymmetry in the lengths of the lower limbs, it seems somewhat strange that Sir James Paget, so late as January, 1886, in an article on "Imperfect Sym-

metry" (which should cover the subject of the defects of symmetry), should have failed to state the fact that the discovery that inequality as to the lengths of the lower limbs is the rule, and not the exception, which started the discussion, was made in the Pennsylvania Hospital in this city.

Dr. Frank H. Hamilton has written, "I think the subject of sufficient importance and so creditable to American surgery as to entitle it to a more conspicuous notice and a faithful historical record."

Mr. Paget, in an article in the *American Journal of the Medical Sciences*, says, "The inequalities of the limbs have been so fully studied that I need only refer to the papers of Dr. Garson in the *Journal of Physiology* and to those which he quotes." "*He* shows clearly that the two corresponding limbs are very seldom of the same length." Mr. Paget further says, "Difference of volume is often as marked as is that of length, and it is sometimes sufficient to suggest suspicion of disease. But the suspicion may generally be dispelled on finding that there neither is now nor ever has been any sign of disease in either limb, and that it is difficult to say which of the two unequal limbs is the better or the more appropriate to the other parts of the body." "The difference of length has usually more importance in practice, for it may be associated with appearances of deformity resembling those which are due to really morbid shortening of a limb, such as may ensue in the defective growths during infantile paralysis, or disease of the hip or knee, or any similar affection. Many cases of suspected slight curvatures of the spine are only examples of the adjustment due to inequality of the lower limbs, and in every such case they should be measured and compared."

My colleague at the Orthopædic Hospital, Dr. H. E. Goodman, tells me that during the many years of his service as pension-examining surgeon for the United States government he has had a great number of applications for pension for disabilities described as lumbago, said to have been the result of injuries or exposure during the late war. In every such instance, Dr. Goodman states that upon a careful examination the severe backache and spinal symptoms were unquestionably accompanied by previously unrecognized asymmetry in the lower limbs, and probably due to this cause.

It is not claimed that in all cases of inequality in the length of the lower limbs there is necessarily a *true* lateral spinal curvature or permanent deformity from rotation of the vertebræ, for we constantly find marked and even excessive inequalities in the length of the lower limbs which have never given rise to any symptoms of spinal disease; indeed, in many cases marked asymmetrical defects have existed which have never been recognized by the individual.

It is nevertheless a fact that in many instances long-continued slight and severe backaches, with loin and pelvic pains, and involving the distribution of the sciatic nerve, with apparent lateral spinal curvatures, are due to, and are absolutely and permanently relieved by a correction of, asymmetry of the lower limbs. The histories of the cases which have been presented this evening, from a large number which I have lately had under care, conclusively demonstrate that by simply correcting the defect of symmetry all of the former distressing and apparently serious symptoms were promptly overcome.

The subject is one of so much interest and practical importance that I am confident it will receive the careful consideration of the Fellows of this Academy, as well as that of the profession generally.

OPHTHALMOSCOPIC EXAMINATIONS OF THE INSANE AT THE STATE HOSPITAL, NORRISTOWN, AND THE INSANE DEPARTMENT OF THE PHILADELPHIA HOSPITAL.

Read before the Philadelphia County Medical Society, April 28, 1886,

BY LOUIS J. LAUTENBACH, M.D.

THE systematic examination of the eyes of the insane at the two hospitals mentioned was begun some three years ago. 707 inmates have been ophthalmoscopically examined: of these 130 were males and 577 females; 62 were inmates of the Philadelphia Hospital and 645 were at the Norristown Hospital. In addition to these, perhaps a hundred private and dispensary patients have been examined in the same manner.

I must acknowledge my indebtedness to Drs. Robert H. Chase and Alice Bennett, of the Norristown Hospital, and to Dr. D. D. Richardson, formerly chief, and Dr.

Philip Leidy, present chief, of the Insane Department Philadelphia Hospital, for kindness and courtesy in placing their patients at my disposal, and also to Dr. Hunt, formerly of the Norristown Hospital, and to Drs. Henry and Avery, of the Philadelphia Hospital, for assistance rendered.

Of these 707 hospital patients, perhaps 150 have been examined under atropia as well as without it; perhaps the half have been examined upon two or more occasions, sometimes as many as eight or ten times. This has been done both to verify previous work and also to watch the eye-conditions during various stages of the mental derangement.

The various structures of the eye were carefully examined and vision taken in all cases; the ear and pharynx were examined in about the half of them.

The refraction has been measured by the ophthalmoscope,—usually without, sometimes with, atropia or homatropin. All cases of myopic astigmatism are included in the column devoted to myopia; cases presenting nearly normal conditions are classified in the table as nearly normal; cataracts have only been noted when the lens-cloud prevented a fair ophthalmoscopic view; iritic deposits are noted only under similar circumstances; retinal hyperæmia expresses the condition of an increased amount of blood with little or no effusion; retinal congestion expresses a more marked increase of fulness with effusion; papillitis includes even the slightest grades of swelling of the disk (including the conditions of ischæmia and œdema of the disk); slight atrophy expresses the minor grades of atrophy; the terms choroiditis, hemorrhagic retina, albuminuric retina, anæmic retina, and glaucoma have their ordinary acceptation.

Table II. will serve to indicate the results obtained.

I might here state that I have selected the statistics of Drs. Allbutt,* Noyes,† and Klein‡ with which to compare my results. Dr. Allbutt has published the ophthalmoscopic records of 214 insane patients; Dr. Noyes, of 60 cases; and Dr. S. Klein, of 134 cases,—making a total of 408 cases.

The total number of my examinations is 707: from this we must subtract 20 cases of cataract and 2 cases of iritic deposits, leaving 685 as the number of patients examined ophthalmoscopically. Of these, 136 are nearly normal, leaving 549 as having some change visible in the eye. This gives as the percentage of the nearly normal cases 19.85 per cent. and of abnormal cases 80.15 per cent. Drs. Allbutt, Noyes, and Klein examined 408 cases, of which 107 presented a healthy or at most a questionable (Klein) fundus, leaving a balance of 301 as accompanied by intra-ocular changes. The percentages of nearly normal cases is 26.22 per cent., and of abnormal cases 73.78 per cent.

Table I.

	Total No. of Insane Patients.	No. with Fundus Changes.	Number Nearly Normal.
Allbutt, Noyes, and Klein...	408	301=73.78%	107=26.22%
Lautenbach.....	685	550=80.15%	135=19.85%

Considering the differences of observers, the discrepancy existing between the percentages, a discrepancy of 6.33 per cent., requiring but the transposition of 3.165 per cent. of the cases from one to the other column (from normal to abnormal in the one case or from abnormal to normal in the other) to make them accord accurately, is much less than is to be expected.

Another close approximation developed, during a study of cases of acute mania (including the recurrent and periodic varieties which are included in the tables of Drs. Allbutt and Noyes), in a paper presented to the Neurological Society.§ In 11.82 per cent. of my 103 cases of acute mania the fundus was normal; in 12.50 per cent. of Allbutt and Noyes's 40 cases, no change in the eye-ground was observed.

I think that we are now in a position, perhaps, to explain why many who had begun such ophthalmological examinations desisted after a short period of work.

Acute-mania cases would scarcely be presented to an investigator in the early part of his work: they are frequently difficult to control and unmanageable. Again, dementias and chronic manias would be sparingly brought forward for examination, because of the difficulty of moving them and of their frequent stubbornness. Cases of melancholia are usually the best to manage, the most willing to have something new tried, and would naturally make up the greater part of the early work of an

* Use of the Ophthalmoscope in Diseases of the Nervous System and of the Kidneys, 1871.
† American Journal of Insanity, 1872, vol. xxviii. p. 410.
‡ Wiener Med. Presse, 1877, p. 89.

§ Journal of Mental and Nervous Diseases, July, 1886, p. 22.

Table II.

Patients examined at the Insane Department, Philadelphia Hospital, and at State Hospital, Norristown, previous to April 14, 1886.	Hypermetropia.			Myopia and Myopic Astigmatism.			Hyper. Astigmatism.	Anisometropia.			Nearly Normal.			Cataract.			Iritic Deposits.	Retinal Hyperæmia.			Retinal Congestion.			Hemorrhagic Retinitis.			Albuminuric Retinitis.	Retinal Anæmia.			Papillitis.			Slight Atrophy.			Atrophy.			Choroiditis.			Glaucoma.	Totals.		Complete Totals.	Complete Totals.†
	M.	F.	T.	M.	F.	T.	F.*	M.	F.	T.	M.	F.	T.	M.	F.	T.	F.*	M.	F.	T.	M.	F.	T.	M.	F.	T.	F.*	F.*	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	M.	F.	T.	F.*	M.	F.		
Mania, acute	11	53	64	..	1	1	4	..	2	2	2	3	5	..	1	1	..	2	11	13	3	14	17	..	..	..	..	1	1	14	15	1	11	12	2	5	7	..	1	1	..	11	61	72	71
" chronic	12	111	123	1	10	11	2	..	4	4	3	14	17	1	6	7	2	2	19	21	1	12	13	..	1	1	..	..	1	10	11	3	18	21	2	46	48	..	4	4	1	13	133	146	137
" recurrent	...	23	23	..	1	1	1	..	..	..	..	4	4	..	1	1	..	..	6	6	..	4	4	..	..	..	..	..	..	2	2	..	1	1	..	5	5	..	3	3	..	...	26	26	25
" periodic	2	4	6	..	...	...	1	..	..	..	1	2	3	..	..	..	..	..	...	...	..	3	3	..	..	..	..	..	..	1	...	1	..	...	..	..	...	..	..	..	..	2	5	7	7
" monomania	4	20	24	..	2	2	..	..	1	1	2	10	12	..	..	..	..	..	2	2	..	4	4	..	..	..	..	..	..	1	1	1	3	4	1	2	3	..	1	1	..	4	23	27	27
Totals	29	211	240	1	14	15	8	..	7	7	8	33	41	1	8	9	2	4	38	42	4	37	41	..	1	1	..	1	3	27	30	5	33	38	5	58	63	..	9	9	1	30	248	278	267
Melancholia, acute	22	43	65	1	2	3	2	1	..	1	9	10	19	..	1	1	..	5	15	20	3	12	15	..	1	1	1	1	3	2	5	2	3	5	2	1	3	..	1	1	..	24	48	72	71
" " (agitans)	...	10	10	..	1	1	..	..	1	1	..	4	4	..	..	..	..	..	3	3	..	1	1	..	..	..	..	..	..	1	1	1	..	2	2	..	1	1	..	..	..	..	...	12	12	12
" subacute	1	...	1	1	..	1	..	..	..	..	1	...	1	..	..	..	..	1	...	1	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	...	...	..	..	..	..	2	...	2	2
" chronic	10	37	47	1	2	3	..	1	..	1	2	14	16	..	..	..	..	2	3	5	1	2	3	1	..	1	1	..	..	2	3	2	2	4	2	15	17	1	..	1	..	12	40	52	52
" attonita	...	...	...	..	..	..	..	1	..	1	..	...	...	..	..	..	..	1	...	1	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	...	...	..	..	..	..	1	...	1	1
Totals	33	90	123	3	5	8	2	3	1	4	12	28	40	..	1	1	..	9	21	30	4	15	19	1	1	2	2	2	4	5	9	4	7	11	4	17	21	1	1	2	..	39	100	139	138
Dementia, acute	1	...	1	..	...	...	..	..	..	..	1	...	1	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	..	22	..	...	...	..	..	..	..	1	.....	1	1
" chronic	13	88	101	1	10	11	2	..	2	2	2	22	24	..	2	2	..	2	6	8	..	1	1	..	..	..	..	..	..	1	1	5	17	...	4	57	61	1	..	1	..	14	106	120	118
" partial	...	42	43	..	1	1	..	1	1	..	7	7	..	3	3	..	..	4	4	..	..	..	..	1	1	..	..	..	..	3	3	..	5	...	..	22	22	..	3	3	..	...	48	48	45
" senilis	...	3	3	1	...	1	..	..	..	..	..	...	...	4	4	..	..	...	...	...	..	..	..	..	..	..	..	..	..	...	...	..	...	5	1	4	5	..	..	..	..	1	8	9	5
" terminal	3	...	3	..	...	...	..	..	..	..	..	...	...	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	1	...	1	2	...	2	..	..	..	..	3	.....	3	3
" organic	3	...	3	..	...	...	..	..	..	..	..	...	...	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	1	...	1	..	2	...	2	..	..	..	..	3	.....	3	3
" apoplectic	2	2	4	..	...	...	..	..	..	..	1	1	..	..	..	..	..	..	...	...	..	..	..	..	..	..	..	..	..	..	..	..	2	...	2	..	1	1	..	..	..	..	2	2	4	4
Totals	22	135	157	2	11	13	3	..	3	3	3	30	33	..	9	9	..	2	10	12	..	1	1	..	1	1	..	..	1	4	5	8	22	30	9	84	93	1	3	4	..	24	164	188	181
Epilepsy	8	22	30	..	2	2	1	1	1	2	3	4	7	1	..	1	..	1	6	7	2	7	9	..	..	..	..	..	1	1	2	..	2	2	1	5	6	..	..	..	..	9	25	34	33
Gen. paral. and cerebral syph.	16	11	27	..	..	..	..	1	1	3	...	3	..	..	..	..	..	2	...	2	1	2	3	..	..	..	..	..	3	2	5	3	..	3	4	7	11	..	1	1	..	16	12	28	28
Imbecility	11	18	29	..	1	1	..	..	1	1	1	4	5	..	..	..	..	7	4	11	..	2	2	1	..	1	..	..	2	2	4	..	2	2	..	5	5	..	1	1	..	11	20	31	31
Opium-habit	...	1	1	..	..	..	..	1	..	1	1	...	1	..	..	..	..	..	...	...	..	...	...	..	..	..	..	..	..	..	...	..	1	1	..	...	...	..	..	..	..	1	1	2	2
Alcohol-habit	...	1	1	..	..	..	..	..	..	..	..	...	...	..	..	..	..	..	...	...	..	...	...	..	..	..	..	..	..	1	1	..	..	..	..	...	...	..	..	..	..	...	1	1	1
Moral insan. and cranks	...	6	6	..	..	..	..	..	..	..	..	6	6	..	..	..	..	..	...	...	..	...	...	..	..	..	..	..	..	..	...	..	..	...	..	...	...	..	..	..	..	...	6	6	6
Totals	35	59	94	..	3	3	1	2	3	5	8	14	22	1	..	1	..	10	10	20	3	11	14	1	..	1	..	..	6	6	12	3	5	8	5	17	22	..	2	2	..	37	65	102	101
Grand totals	119	495	614	6	33	39	14	5	14	19	31	105	136	2	18	20	2	25	79	104	11	64	75	2	3	5	2	3	14	42	56	20	67	87	23	176	199	2	15	17	1	130	577	707	685

M=Males; F=Females; T=Totals.

* No cases observed among males.

† Excluding cataract and iritic deposits.

investigator in this field, and it is just in this class of cases that changes in the eye-ground occur less frequently.

Taking the cases of Allbutt, Noyes, and Klein, we find that they examined 24 cases of melancholia. Of these Drs. Allbutt and Noyes examined 18 cases, finding in 8 cases the fundus healthy. Dr. Klein's 6 cases are here excluded, as he notes nothing whatever concerning the condition of the eye. We have, then, 44.44 per cent. as healthy, and 55.56 per cent. as abnormal. In my own 138 cases (one cataract case excluded), 40 cases were nearly normal,—in other words, 28.98 per cent.

We also notice that 30 cases of melancholia are put down as connected with retinal hyperæmia. No doubt many of these cases would be examined and, unless attention was particularly called to the hyperæmic condition, no note would be taken of it. Of the 138 cases, 70 (or 50.72 per cent.) are either nearly normal or have a hyperæmic retina.

Contrasting these results with those found in acute mania (excluding recurrent and periodic), we find that 71 cases were examined ophthalmoscopically, of which number but 5, or 7 per cent., were nearly normal; of chronic mania 137 cases were examined, of which 17, or 12.41 per cent., were nearly normal; of cases of mania (excluding monomania, which perhaps does not properly belong under this general heading) 242 cases were examined, of which 29, or 11.98 per cent., were nearly normal. It is easy to see that, had attention been bestowed exclusively upon cases of mania, eye-ground changes would have been observed, and that in an unusual proportion.

The large number of cases of retinal hyperæmia, 104, and of retinal congestions, 75, a total of 179 cases (or 25.98 per cent.), seems remarkable, when we consider that the class of patients examined are by no means great readers, nor do they use their eyes in trying occupations.

The number of atrophies occurring in chronic dementia is noticeable. Of 180 cases examined, 83 (or 71.21 per cent.) were atrophic cases.

Not the least noticeable line of the table is that devoted to cases of moral insanity and cranks, of whom 6 cases were examined and no eye-changes observed in any of them.

I have refrained from drawing conclusions, believing that to do this would require more study than has yet been given to the subject, and that, in order the more accurately to study the connection between eye-ground changes and mental derangements, the series of observations here recorded must be compared with a similar series made by the same individual upon those who are mentally sound and healthy. This work is now progressing, and will, when finished, be presented.

N.W. Cor. Sixth and Green Streets, Phila.

TRANSLATIONS.

Experiments on the Toxic Power of Febrile Urine.—M. Feltz, of Nancy, forwards to the Académie des Sciences a paper entitled "Essai expérimental sur le Pouvoir toxique des Urines fébriles" (An Experimental Attempt to Determine the Toxic Power of Febrile Urine). He states that in a former work by him and the late Professor Ritter, which gained the prize in 1884, it was demonstrated that normal fresh urine, well filtered and heated to 33° Centigrade (91.4° Fahr.), and of a density varying from 1018 to 1020, is toxic to dogs if the quantity injected into their veins be equal to the volume of urine they secrete in twenty-four hours three times multiplied. The weight of this quantity is, with some slight variations, about the fifteenth of the weight of the animal. The symptoms which are thus provoked are identical with those of uræmia or uricæmia determined in dogs when the urinary secretion is prevented. MM. Ritter and Feltz were led by the result of their experiments published in their former memoir to suppose that the toxicity of normal urine increases with its density; also that the principal toxic agent in normal urine is contained in its inorganic rather than in its organic components, and especially in its potassium salts.

Professor Feltz has recently made a fresh series of experiments with a view of ascertaining the action of certain kinds of human pathological urine. The action of febrile urine was first studied; the symptoms of uræmia, convulsions, coma, and finally death, appeared more quickly than with normal urine. Fourteen dogs were experimented on, and in all much smaller

doses of urine produced the above results than would have been possible with normal urine. A third or the half of a toxic dose of normal urine is a toxic dose with urine positively febrile. The toxic power of febrile urine has no relation with its density. Urine of 1007 density may be as toxic as urine of 1024 density. This is very evident in the urine of typhoid and rheumatic patients. Thus there are in pathological urine toxic agents which are absent in normal urine, or present only in very small quantities.

Influence of Light and its Constituent Rays on the Development and Properties of the Bacillus Anthracis.—In an article on the "Influence de la Lumière blanche et de ses Rayons sur le Développement et les Propriétés du Bacillus anthracis," by M. S. Arloing, in the *Archives de Physiologie Normale et Pathologique*, the author arrives at the following conclusions. Gaslight is slightly injurious to the growth of bacillus anthracis. Summer sunlight rapidly suppresses the development of the spores of the bacillus anthracis when its rays penetrate into the fluid which holds them in suspension. Summer sunlight gradually lessens the growth of the mycelium, and can transform the cultivations into a series of vaccines as effectually as heat. These results are effected by all the rays combined, and not by any one of its constituent rays. The results are in proportion to the intensity of the rays and the transparency of the medium. Light has an important biological effect on the life of the infinitely small. Light is probably a factor attenuating several virus, if not all of them.

Preventive Inoculation of Peripneumonia by Subcutaneous Injection.—M. Laquerrière stated, at a recent meeting of the Société Centrale de la Médecine Vétérinaire, that peripneumonia is a contagious affection special to ruminants. Preventive inoculation, not made with attenuated virus, but with strong virus,—the fluid removed from the lungs of an animal with peripneumonia,—is somewhat analogous to the practice of inoculating people with the fluid removed from variolic pustules, and not vaccine. Experience has demonstrated that for peripneumonia, inoculations must be effected in the animal's tail; otherwise it is not successful. Notwithstanding these precautions, there are certain drawbacks to the practice of using strong virus; but they can only be overcome when it has been discovered how to attenuate the virus of peripneumonia.

On Suturing Nerves. — At a meeting of the Paris Biological Society, Dr. G. Assaky presented his doctoral thesis on "La Suture des Nerfs à Distance." This thesis may be summarized as follows. When there is loss of substance in the peripheral nerve, it is advisable to join the central extremity to the peripheral by means of catgut threads: even though the two extremities cannot be brought into contact, the catgut suture produces excellent results. Experiments made on animals show that this method hastens nerve-regeneration. Sutures at a distance call into play the elasticity of nerves, and lessen the space between the two extremities. The cicatrix along the track of the catgut threads is richer in newly-formed nerve-fibres than when nature is left to cure unaided.

Glaucoma. — In a communication to the Académie de Médecine, M. Panas advised the treatment of certain forms of glaucoma without operation by the instillation of myotics. These agents, which have been recognized as palliatives, are capable of acting as curative remedies in special cases.

The two which he prefers are (1) Distilled water, five grammes; eserine sulphate, five centigrammes; and (2) Distilled water, five grammes; pilocarpine nitrate, ten centigrammes.

The solution of eserine is preferred; to be instilled into the eye.—*Le Progrès Médical*, June 19.

Plans for Improvement of the Philadelphia Water-Supply. — The report of Colonel J. A. Ludlow, Ex-Chief-Engineer of the Water Department, contains a strong argument in favor of improving the water-supply of Philadelphia. The advantages of two different sources are considered as substitutes for the Schuylkill,—the Perkiomen and the Point Pleasant. The practicability and comparatively small cost of the Point Pleasant plan are taken as establishing the advisability of adopting it, so as to give the city an abundant supply of pure water.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 10, 1886.

EDITORIAL.

THE MANAGEMENT OF THE THIRD STAGE OF LABOR.

THE indications for the proper delivery of the after-birth, long insisted upon by the Dublin School of Midwifery, and most carefully defined by Credé forty years ago, were first distinctly formulated in an English text-book by Playfair, and more recently in the excellent manual of Lusk.* It will probably be correct to say that the large majority of practitioners in this country now treat their patients according to Credé's method or one of its modifications.

A recent attack upon this procedure was, however, made by Dr. Hiram Corson, in a paper read before the Obstetrical Society of Philadelphia at the meeting held on May 6 last. Dr. Corson criticises what he terms the "unnecessary severity" of Credé's method, and speaks of it as a "reach of hand into the vagina the moment after the child is born, and the grasping, squeezing, and forcing down of the womb by the other hand on the tender, sore abdomen, to say nothing of having that heavy hand pressing on a tight bandage for two hours more, in accordance with regulation orders."†

It is worth while to inquire whether Dr. Corson does justice to Credé in this paragraph. According to the latter, the procedure with which his name is inseparably connected is performed as follows:

"It is important to seize the proper time for making pressure upon the uterus. The entire hand is first placed softly upon the uterine region and very gentle stroking movements are made over as large a surface of the uterus as possible, until the beginning of the contraction is noticed under the hand. Then with the hand and fingers spread out, or with both hands if one is not large enough, and at the moment when the uterine contraction seems to be most forcible, equable firm pressure is made upon the fundus and walls of the uterus in the direction of the hollow of the sacrum. The entire placenta and all blood which may have accumulated in the uterus is then expelled from the vulva. To press upon the uterus for the purpose of expelling the placenta, in the absence of uterine contractions, is entirely wrong, and fails to secure the desired result."

The expression of the placenta was recommended by Credé especially with the object of avoiding the introduction of the hand into the vagina or uterus, which Dr. Corson erroneously assumes to be part of the method, and which is necessary only in the very rarest cases where the method of Credé has been properly carried out.

Professors Ahlfeld, of Marburg, and Dohrn, of Königsberg, have also attacked the method of Credé, and advocated the expectant plan in the treatment of the third stage of labor. Ahlfeld claims that dangerous hemorrhages, retention of membranes, and other serious puerperal diseases follow the expression of the after-birth, and counsels to abstain strictly from any interference. He finds it necessary, however, in the majority of cases to exercise a slight downward pressure over the fundus uteri in order to deliver the placenta after it is detached. The after-birth was expelled spontaneously only sixty-five times in two hundred and seventy-five cases in which careful observations were made. In the remaining two hundred and ten the manual expression was necessary. In one case he waited eighteen hours, but the average time between delivery of the child and expression of the placenta was

* Science and Art of Midwifery, second edition, p. 215.
† Maryland Medical Journal, June 12, 1886, p. 129.

ninety-two minutes. In the absence of hemorrhage or other untoward symptoms, he says that the physician can safely leave his patient after the expiration of fifteen to thirty minutes and intrust the management of the placenta to the nurse. Even in cases where rupture of the perineum occurred, the operation for its restoration was done before extraction of the placenta. Ahlfeld refers to sixty cases in which accidental or operative wounds of the external genitals were sutured while the placenta was still in utero.

The figures of Ahlfeld show that women may be left for hours with a placenta in the uterus or vagina without danger, but they fail to demonstrate the superiority of this *laissez-aller* midwifery to the rational practice of the art based upon scientific principles. Obstetricians whose practice is guided by reason rather than authority, while respecting the adage that "all meddlesome midwifery is bad," will conclude, with Lusk, that "there is no sense in reposing a blind, unreasoning confidence in the powers of nature."

THE PROSECUTION OF ILLEGAL PRACTITIONERS.

THE *Philadelphia Medical Times* in former years has reminded the County Medical Society that it owes certain duties to the public, prominent among which is the duty of enlightening the community with regard to the importance of restricting the practice of medicine to persons who have complied with the requirements of the laws, and who are, presumably at least, qualified by education and special training for such responsible duties as they are called upon to perform. The people need to be instructed with regard to the dangers to life and health when these are intrusted to the hands of ignorant and unscrupulous persons, whether they are charlatans, strictly speaking, or not. We have also more than once taken occasion to express satisfaction since the County Medical Society, through its efficient Committee on Hygiene and the Relations of the Profession to the Public, has taken up this work, and have pointed to the good results already obtained by the Society as evidences of increased usefulness. We therefore feel at liberty at present to speak a word of caution. It is possible that zeal may run away with discretion, and there is danger that our attitude may be misunderstood, and that persecution may be inferred where prosecution only was intended. It is evident that, owing to some psychological peculiarity of organization, there are persons who will seek after irregular practitioners of medicine, to be attended by such, and if the superior interests of the public require that their liberty to do so is to be abridged, it must be done by society as a body, and not by a favored class (as it appears to them) of medical men. To the public who are not well informed, such an action may appear as if it were only a quarrel among doctors, between the "big pills," the "little pills," and the "no pills;" and the sympathy in every Anglo-Saxon community will be excited for the weaker party in the fight. We therefore deprecate the tone of the notices in the daily press with regard to the "war on illegal practitioners," and the "prosecution of unregistered physicians by the County Medical Society."

The position we take, and we regard it as the only sound and safe one, is that the committee should scrupulously restrict its work to holding up the hands of the District Attorney by endeavoring to have witnesses present when the case comes up for trial, and by seeing that the case for the people is properly presented. The County Medical Society cannot safely take a more pronounced position than this. If funds are needed for carrying on this work, the contributions, for the moral effect of the thing, should as far as possible be obtained

outside of the ranks of the profession. We should not take any step which would serve to foster the idea that the profession needs protection from quacks. No one knows better than the educated physician how much assistance they render by making work for him to attend to. It is the public that the laws were designed to protect, and it is the public which is, and of right should be, most interested in having them enforced.

A FEW FALLACIES.

PERHAPS the formulation of a few popular fallacies may not be without interest to our readers at this time, even if they be indisposed to accept the statements without some qualification.

It is a fallacy to suppose:

That alcoholic drinks support physical strength during excessively hot weather.

That seasonable weather is ever unhealthy.

That men and women should eat the same kind and amount of food when their manner of life is entirely different.

That pie is really indigestible; or, in general, that the quality of indigestibility can be logically affirmed of any article of food absolutely and apart from a consideration of the digestive capacity of the particular stomach the powers of which are to be tested.

That disease, in any given case, consists simply in the group of symptoms complained of by the patient, or morbid signs detected by the physician.

That all morbid processes are necessarily destructive in their nature, and are never conservative. Disease in certain cases may be nature's method of righting a wrong or overcoming the effects of some disturbing agent. A certain portion of the clinical picture of a disease is therefore made up of evidences of reaction as well as of direct morbid action.

That, in the production of cholera infantum, the elevation of the atmospheric temperature plays the most important part, or furnishes the principal indication for treatment.

That a person is well who feels well, and that sickness consists in feeling sick.

That specifics can be said to exist in modern medicine.

That if an individual is sick, takes medicine, and recovers, there is any necessary connection established between the administration of the remedy and the happy result, or that the multiplication of such cases can do more than establish a probability of the remedy rendering service under conditions apparently analogous.

That if a patient has ever contracted syphilis, every morbid sign occurring later in life is necessarily due to this disease, and calls for the administration of the iodides.

That an insane patient must necessarily be a fit subject for removal from home; admitting at the same time that the percentage of recoveries in hospitals for the insane is much greater among mild and recent cases.

That the actual number of years of a man's life bears any direct relation to the conditions of the physical frame known as senile degeneration.

That typical hysteria can exist in a perfectly healthy patient, even though the essential lesion may not be discoverable by the pathologist.

That the conditions of modern life in our highest civilization are most favorable for the development of a large, healthy, and vigorous population.

That there is an essential distinction between sanitary and sanatory science.

That there are such things as "laws of health."

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NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

TITULAR distinctions are, it must be confessed, very greatly coveted in this country; the motive, of course, as in most human affairs, is mixed; the title tickles the public fancy, and to a professional man is a kind of *cachet* understood by "society," which is not slow to swell the golden stream flowing into the pocket of him whom the Crown delighteth to honor. Yet, though some of these distinctions are undoubtedly court favors, many more are bestowed by the ministers of the day from political or personal motives. The medical profession has had a shower of such distinctions lately. Dr. James Sawyer, of Birmingham (who had been chairman of Lord Randolph Churchill's Election Committee when that erratic politician made an attempt on the stronghold of radicalism), was made a knight soon after the elections, on account, it was stated, of his great services to medicine. Mr. Savory, the senior surgeon to St. Bartholomew's Hospital, was offered a knighthood, but declined it on the ground, gossip says, that he felt himself entitled to an hereditary distinction. Dr. Dyce Duckworth has become a knight because he handed a trowel to the queen when she laid the foundation of a new Examination Hall, and also perhaps because he is the brother of the famous canon, who is, or was, a court favorite. Dr. Sieveking, who is one of the Physicians Extraordinary, has accepted a knighthood somewhat tardily offered. So has Dr. Douglas Maclagan, the well-known Professor of Medical Jurisprudence at Edinburgh. Mr. John Tomes, a dentist of exceptional scientific and social standing, has been knighted also, making the second dentist who has been the recipient of this distinction. Possibly these so-called "birthday honors" have little or no interest to you, but writing from London I can hardly avoid mentioning them, as they are matters of some professional as well as general social importance. The army surgeons are rather angry because only one of their number has received this "birthday" honor, and because he—Professor Longmere—was not made a K.C.B., but only a knight,—a distinction without a difference, which we may hope may forever remain unintelligible out of England.

The Conversazione at the Royal College of Surgeons was, as always, well attended, for the President had thoughtfully invited a large number of nurses. The guests looked a little more appropriate to the place than is usual. It is indeed a curious sight to see gayly-dressed ladies wandering amidst skeletons large and small, human, mammalian, and reptilian, or gazing with a vacuous expression at bottled specimens of tumors and deformities removed from all portions of the human form divine, not excepting those which are least commonly exposed to view. Happily, nobody but the initiated can understand museum "pickles," and the initiated are careful to feign ignorance.

Almost all the learned societies are over for this session, and the wearied secretaries are turning their thoughts to the preparation of the next volumes of Transactions. The Royal Medical and Chirurgical Society had an interesting meeting on June 8, when a paper by Dr. Angel Money on the statistics of one hundred and ninety-nine cases of pneumonia, taken from the note-books of University College Hospital, was discussed by Dr. Wilson Fox, Dr. O. Sturges, Dr. Moxon, and others. The paper had special reference to delirium, which was stated to occur with greatest frequency in patients between twenty and thirty years of age in whom the temperature went above 104° Fahr. Delirium appeared to have no influence on prognosis. Dr. O. Sturges disputed another conclusion drawn by Dr. Money, which was that delirium is especially apt to occur in connection with apex pneumonia. Dr. Sturges said pneumonia in that situation was common in children, but the symptoms were not markedly different from those seen in basic pneumonia. All the speakers dwelt on the extreme difficulty in prognosis, Dr. Wilson Fox observing that Dr. Money's figures gave the paradoxical result that pneumonia was less fatal when delirium was present than when it was absent, and Dr. Sturges stating that the mortality had been extraordinarily high this year without apparent cause.

A discussion, short but interesting, was raised by a paper at the Ophthalmological Society read by Mr. Brudenell Carter. Mr. Anderson Critchett had read a paper before the Société Française d'Ophthalmologie, recommending a somewhat novel method of operating in cataract-extraction; the chief point was the complete abandonment of the speculum; the eye is steadied with forceps (Bell-Taylor's) held between the thumb and first two fingers, and the lid is lifted with the ring-finger of the same hand. The great advantage claimed by Mr. Critchett is that the finger is able to detect the first commencement of spasm in the orbicularis, and to release the lid before any danger from compression by its spasmodic contraction can arise. This spasm, it appears, is much more likely to occur with cocaine than even when no anæsthetic was used, as the drug diminishes control over the lids. The liability to this spasm is diminished by putting cocaine into both eyes when one is to be operated on. Mr. Carter's paper was a criticism of Mr. Critchett's operation. He urged that the method restricted the movements of the fixing hand, and narrowed the region in which the fixing forceps could be applied. He preferred to

have the lid raised by an assistant using the elevator designed by Dr. Noyes.

Dr. John Phillips described a very curious family to the Obstetrical Society on June 2: a woman nine times pregnant to the same husband gave birth in her fourth, sixth, eighth, and ninth pregnancies to hermaphrodites (so called); none of them survived more than a few days.

Sir Joseph Lister is not now making use of the spray which he formerly invariably employed even for minor operations. The instruments and the hands of the operator and assistants are thoroughly disinfected with some antiseptic fluid, generally the double chloride of mercury and ammonium, known generations ago as sal alembroth, and before closing the wound it is thoroughly washed out with the antiseptic. The dressing applied is gauze impregnated with mercuric chloride. As the antiseptic is not volatile, it is not necessary to make the dressing impervious, and the "hat-lining," which was a source of much discomfort to the patient by heating the limb, is not now required. The "protective" also may be omitted, as the perchloride of the strength used is not irritating. Sir Joseph Lister is a born experimenter, and cannot rest upon his laurels: he has constantly sought to simplify and perfect the method with which his name is identified. The temporary if not permanent abandonment of the spray has been a source of some distress to many of those who have blindly followed his dictates without taking the trouble to grasp the principle which has guided them. He has, in fact, effected a revolution in the treatment of wounds, which has become so wide-spread that there is now hardly a surgeon in London who does not make use of some antiseptic: consequently the wards of our hospitals are much sweeter and cleaner, for decomposing wounds are comparatively uncommon, and hence the sources of infection are fewer. Perhaps the latter fact may explain the impunity with which, in most hospitals, the spray can be abandoned.

Operations on the brain have not yet become so common but that it is worth while to refer to a case of traumatic epilepsy now in the National Hospital for the Paralyzed and Epileptic, Queen's Square. The patient was a man who had suffered from severe epilepsy for several years,—since, that is to say, an injury to the head. It was known that the brain was involved, and Mr. Victor Horsley, the assistant-surgeon to the hospital, trephined the skull in the neighborhood of the wound, cut away a considerable quantity of bone, and then boldly excised the scar in the brain, together with the surrounding cerebral tissue. The mass excised measured an inch deep and an inch and a half long, and about three-quarters of an inch broad. Mr. Horsley has made a very large number of experiments on the brains of monkeys,—chiefly in conjunction with Professor Schäfer,—often involving the removal or destruction of considerable areas of brain-substance, and the uniform success of these operations on monkeys, for the animals almost always recover, emboldens him to operate fearlessly within the cranial cavity. The experience with monkeys also has afforded valuable information as to the proper method of managing such cases after operation. In the case of the patient in the Queen's Square Hospital, a drainage-tube was only used for one day; the wound was practically healed in a week, and all dressings were removed on the tenth day. With regard to the mere question of trephining, anybody who will read the essay of the elder Bell on this subject in his work on surgery cannot fail to be convinced that modern surgery has, as a rule, shown an altogether unnecessary fear of the operation, which was formerly undertaken on very slight indications.

DAWSON WILLIAMS.

LONDON, May 28, 1886.

THE hospital for diseases of the throat with which Dr. Morell Mackenzie has been connected for so many years has once more become the scene of dissension between the medical and lay managing authorities. It will probably be remembered that in the year 1877 the same institution was brought prominently into notice through disagreements which arose at that time on the subject of its internal management, and that the result was that the Prince of Wales withdrew his patronage from the charity. Since then but little notice has been attracted towards it, although it is tolerably clear that things have not always been thoroughly satisfactory to all concerned in the interval. Now, however, a climax has occurred, and six members of the medical staff have resigned their positions in the hospital rather than submit to the indignity which they consider is threatened them at the hands of the lay committee.

The facts of the case are briefly as follows. In January last the then senior physician, Dr. Hunter Semple, was requested to send in his resignation at a moment's notice; and his very natural objection that he would require some little time to consider the matter was met by the reply that a meeting of the committee was on the point of being held, at which it was necessary that the resignation should be read. Whether wisely or not, Dr. Semple then and there complied with the request, and forthwith the committee, having thus created a vacancy in the service of the hospital, nominated to the empty post the most junior member of the staff, Mr. Mark Hovell. This nomination, moreover, was specially advocated by Dr. Morell Mackenzie, who is thus unfortunately at variance with all his colleagues except Mr. Hovell, since it is contended on behalf of the resigning members

that the medical council alone—*i.e.*, the staff of physicians and surgeons—possessed the right of making any alterations in the staff appointments; and, further, that the option of assuming Dr. Semple's work should have been offered to each remaining officer in order of seniority. The lay committee, with Dr. Morell Mackenzie, having persisted in their refusal to accede to the demand for a reconsideration of their action, the members of the staff, including Dr. Prosser James, Dr. MacNeill Whistler, Dr. Edward Woakes, Dr. Fenton Jones, and Mr. George Stoker, with Dr. Semple, have therefore forwarded their resignations to Lord Calthorpe, president of the hospital, and have also issued a "statement" setting forth the history of the quarrel and the grounds on which they base their special claims to direct the strictly professional affairs of the hospital.

What will be the next step in the drama it is not easy to say. That the action of Dr. Morell Mackenzie in the matter is likely to provoke unfavorable criticism there can be little doubt; and that the prosperity of the hospital itself will be seriously imperilled by the publicity that the incident is sure to obtain is sufficiently obvious. It has not without a good deal of difficulty recovered so far from the loss of prestige which followed the exposures of nine years ago; indeed, it has never completely gained the ground it then lost in public estimation; and it is eminently unfortunate that it should thus once more be threatened with temporary ruin.

The fact that the President of the Royal College of Surgeons, Mr. Savory, has been offered and has refused a knighthood as the outcome of his official appearance at the ceremony of laying the foundation-stone of the new Examination Hall has already been made known to your readers. The reason for the refusal may not, however, be obvious to them: it lay in the fact that by accepting the inferior title while the head of the sister College of Physicians, Sir William Jenner, enjoys both the dignity of a baronetcy and a K.C.B.-ship, Mr. Savory would practically have been a consenting party to the theory that the College of Surgeons was less worthy of honor than that dedicated to the physicians. The course of action he pursued on the occasion has unquestionably commended itself to the profession generally, especially the surgical branch of it, which naturally feels that, apart from all personal considerations, its representative at so important a function with the queen, attending *in propria persona*, ought to have stood on the same level with the more favored representative of physic. Some one, however, has been found to accept the reward proffered in vain to Mr. Savory, the fortunate individual being Dr. Dyce Duckworth, who acted as chairman of the building committee in connection with the Embankment ceremony on March 24. Sir Dyce is a brother of Canon Duckworth, whose rapid promotion owed so much to royal favor; and the new knight himself seems to have enjoyed no inconsiderable share of the good fortune that has marked the public career of his clerical relative. Born at Liverpool in 1840, Sir Dyce Duckworth has long occupied a prominent place in the medical world, his position as Physician to St. Bartholomew's Hospital, as Treasurer to the Royal College of Physicians, in which post he succeeded the late Dr. Barclay, and as representative of the College on the General Medical Council in succession to Sir Henry Pitman, abundantly testifying to the esteem in which he is held. His business talents make him an invaluable assistant in carrying out the building schemes of the two London colleges; and it is said he owes this special capacity to the fact that prior to commencing the study of medicine he passed some time in one of the large Liverpool warehouses. He is still young enough to achieve greater works than any he has yet accomplished.

The possibility of the new Medical Bill, already read a second time in the House of Commons, becoming law is being eagerly canvassed among certain sections of the profession; but it must be honestly confessed that the great majority of general practitioners appear to take only the most apathetic interest in its fate, or to care little whether or not it ever reaches the final stage. The principal features of the new measure are the provision for a direct representation of the body of the profession on the General Medical Council, which is at present constituted of representatives from the various universities and licensing corporations, together with a certain number of independent members nominated by the Crown. In the reformed Council the distribution of members will be somewhat modified and their number increased by the addition of the direct representatives, who will be elected by the profession as a whole. Whether the future history of the Council, when thus rearranged, will afford a more dignified record than has been presented by its performances hitherto, remains to be seen. The likelihood of such a contingency is not excessively great, for the new bill will materially limit its powers by assigning to the Privy Council rights of interference which will tend to nullify very much of the supreme influence that ought properly to belong to what is in spirit and in substance the Parliament of Medicine. Another objectionable feature of the bill is that it proposes to deprive single corporations, such as the Royal College of Physicians and Surgeons, etc., of the privilege of conferring complete licenses to practise, insisting that such licenses shall be given only by two or more such bodies when conjoined to form a common examining board. Such boards have

recently been constituted in London by the fusion of the Royal Colleges of Physicians and Surgeons, and in Scotland by the combination of the College of Physicians and Surgeons of Edinburgh with the Faculty of Physicians and Surgeons of Glasgow. But these are purely voluntary conjunctions, and the participating colleges have not by their action thereby deprived themselves of reverting, should they see fit, to the former practice of independent qualification; and they are naturally in arms against the proposal to deprive them of their privileges in this respect. It is tolerably certain, however, that their sensibilities will be consulted by the government, and an amendment of the unpalatable clauses is to be introduced when the bill is in the committee stage. This is decidedly fortunate for such bodies as the Apothecaries' Society, and the King's and Queen's College of Physicians in Ireland, which would have come within measurable distance of extinction had the original proposition been ultimately carried. The new bill also deals with the question of the registration in Great Britain of degrees in medicine obtained in foreign countries, and in this connection the liberality of the concessions introduced has excited not a little adverse criticism. The safeguards provided may, however, be accepted as sufficient to insure the thorough respectability of all such qualifications as are admitted under this head, although the superior rights of interference to be allotted to the Privy Council over the General Medical Council as judges of the registrability of such degrees is taken exception to in many quarters, the opinion being held that the responsibility of deciding on all questions of the kind should be confined entirely to the medical authority. This part of the measure may likewise undergo satisfactory modification in committee; and should the state of business in the House of Commons be favorable to the further progress of the bill, we shall soon know the exact shape in which it will be inscribed on the statute-book.

The various medical societies are one by one rapidly approaching the end of their sessional labors, and already the concluding meetings have been held in connection with three of the principal,—viz., the Medical, the Pathological, and the Clinical. At the latter, which adjourned last night until October, a vast amount of very valuable work has been accomplished during the winter, not the least important part of which is unrecorded in the official volume of Transactions, a report of the discussions on the papers read finding no place in its pages. The misfortune attending this omission was clearly shown last night in the discussion which ensued on the reading of a communication from Mr. R. W. Parker on the "Treatment of Nævus," based on the results of five hundred and sixty-four cases occurring in his practice at the East London Hospital for Children. Mr. Parker boldly and urgently advocated the treatment of these growths by *excision*, and stigmatized the method of ligaturing them as "barbarous," a condemnation which evoked a warm expression of dissent from Mr. Golding Bird, of Guy's, who vigorously rejected the method of excision and strongly advocated the ligature, which he said he invariably adopted except in those cases, as of nævi about the eyelids and nose, in which galvano-puncture alone yielded satisfactory results. That opinions differ was illustrated by the next speaker, Dr. Ward Cousins, of Portsmouth, who roundly denounced even the ligature, and cast his vote in favor of scarifying the nævoid growths with a knife. His plan is to puncture repeatedly around the circumference of the tumor, allowing ample time between successive operations for contraction and healing, always pursuing the same plan of circumferential scarification. He seemed to be quite satisfied with the success of the method in his hands. Mr. Parker's paper reviewed the various modes of dealing with nævi in common use, and of caustics he mentioned nitric acid as, in his opinion, the only one on which reliance could be placed, and then only when of the strongest kind. Injection of coagulants was unhesitatingly condemned; but the employment of electrolysis in some instances was favorably regarded. His statement that nævi very rarely tend to spontaneous cure was not borne out by the experience of other speakers, and it is not likely to be generally endorsed by those who have had much opportunity of observing the progress of these growths in many cases.

At the same meeting of the Clinical Society, Dr. W. M. Ord (St. Thomas's) read the report of a committee appointed to consider the respective advantages of the various tests for albumen introduced into clinical practice. The attention of the committee was given to the eight following tests: 1. Dr. Oliver's potassio-mercuric-iodide test-papers; 2. Dr. Pavy's pellets of citric acid and ferrocyanide of potassium; 3. Dr. Johnson's picric acid; 4. Sir William Robert's acid brine; 5. Picric acid saturated with brine; 6. Solution of potassio-mercuric iodide and picric acid; 7. Nitric acid; 8. Acetic acid and heat. A large number of experiments were made, some of them being specially directed to determine the delicacy of the tests in detecting albuminous bodies in fluids other than urine. Respecting the value of the several methods mentioned, however, when applied to bedside practice, the conclusions arrived at point strongly in favor of the test-papers introduced by Dr. Oliver, of Harrogate, which are already in very general use, as being the most convenient. But for extreme delicacy of reaction the solution of potassio-mercuric iodide with citric acid, employed after Hia-

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ler's method, is signalized as absolutely *the* most trustworthy, this test being found to yield evidence of albumen in urines which afford no reaction even with nitric acid. The latter reagent is highly spoken of in the report as still worthy of full confidence; and, in general terms, it is said that whoever will habituate himself to the constant use of any one of the tests named may implicitly rely on the results so obtained,—always, of course, on the understanding that fallacies are provided against. The report points out that our knowledge of the reactions of albumens is still imperfect and capable of much improvement, and that it does not pretend to more than deal with the subject as at present understood.

The Queen's birthday is always an occasion marked by the distribution of honors, the lion's share of which, however, as a rule, falls to the military and civil services. This year an unusually large number of medical men are mentioned as having been selected to receive the honor of knighthood, among them being Dr. E. H. Sieveking, of St. Mary's Hospital, whose reputation as a pathologist is world-wide; Mr. W. White Cooper, the well-known ophthalmic surgeon; Dr. Douglas Maclagan, Professor of Medical Jurisprudence in Edinburgh University; and Mr. John Tomes, the dental surgeon. Surgeon-General T. Langmore also is named in the same connection, and a considerable number of "companions" both of the order of St. Michael and St. George and of the Indian Empire have been created from out of the ranks of military surgeons.

On Tuesday last a statue of the late Sir Erasmus Wilson was unveiled at Margate, the site selected for the figure being the courtyard of the Royal Sea-Bathing Infirmary, on the improvement of which Sir Erasmus expended some thirty thousand pounds during his life. Sir James Paget performed the ceremony, and delivered a sympathetic and eulogistic address, in which he briefly sketched the beneficence of the late knight. A special train conveyed about one hundred invited guests from London, and among those present was Dr. Oliver Wendell Holmes.

To-day Sir James Paget has arranged to perform a similar ceremony at Oxford, where in the Central Court of the University Museum he will unveil a statue of John Hunter, and deliver an address which will probably be both lengthier and more strictly of a scientific character than that he gave at Margate. AN OCCASIONAL CORRESPONDENT.

NAPHTHALIN.—Rossbach has pointed out the great usefulness of naphthalin in preventing urine from decomposing. In a case of vesical catarrh it was given in doses of one or two grains, and in the course of two or three days the decomposition was almost completely arrested.

PROCEEDINGS OF SOCIETIES.

MEDICAL SOCIETY OF THE STATE OF PENNSYLVANIA.

(Continued from page 724.)

Proceedings of second day.

IMMEDIATELY upon the opening of the morning session the report of the Judicial Council was read, announcing its decision in favor of admitting the delegates from the Philadelphia County Medical Society. An addendum, signed by two members of the Council, expressed their opinion that no legal election had been held. This was adopted with applause.

The Nominating Committee was then announced: Allegheny, R. B. Mowry; Bedford, H. H. Hill; Berks, W. B. Shaner; Blair, W. C. Roller; Bucks, A. M. Cooper; Cambria, W. B. Lowman; Carbon, R. Leonard; Centre, F. H. Van Valzah; Chester, R. B. Ewing; Clearfield, J. L. Henderson; Columbia, F. W. Redeker; Crawford, W. A. Bishop; Delaware, W. B. Ulrick; Dauphin, W. T. Bishop; Elk, E. J. Russ; Erie, J. L. Stewart; Franklin, G. S. Hull; Green, W. H. Johnson; Indiana, L. S. Clagett; Lackawanna, J. R. Murphy; Lebanon, J. P. Zimmer; Luzerne, G. W. Guthrie; Lycoming, J. C. Thompson; Mifflin, A. H. Shaffer; Montgomery, D. W. Shelly; Montour, I. Purcell; Northampton, D. H. Keller; Northumberland, J. Miles; Philadelphia, S. W. Gross; Schuylkill, D. J. McKibben; Snyder, P. Herman; Susquehanna, C. C. Halsey; Warren, John Curwen; Westmoreland, A. H. Peebles; York, J. W. Kerr; Lancaster, M. L. Herr.

After the announcement of the nominations, Dr. John T. Carpenter, of Pottsville, delivered the address upon

MENTAL DISORDERS.

He spoke of the causes of mental disorders, and how insane patients should be treated. In his opinion, only twenty per cent. of insane patients sent to asylums ever recover. No doubt there could be more saved if they had proper care. He spoke of the causes of insanity, and said that a great deal of it was caused by our fast American life. He scored the press for its tendency to sensationalism, and arraigned the newspapers for considerable of the crime that is committed. Boys too early become addicted to alcoholism and the use of tobacco, and this in time brings about disease of the nervous system. The strain of political excitement, speculation in stocks, loss of peace and means, all tend to break down the nervous system. The speaker asked, "Who will reform the daily press? The person who brings about a reform and frees it from sensationalism will be a benefactor of mankind." In conclusion, he advised the members of the Society to investigate the

causes of insanity and the condition of insane persons.

Dr. Benjamin Lee offered the following resolution after the reading of Dr. Carpenter's Address:

"*Resolved*, That this Society recommends the County Societies in affiliation with it to appoint a Committee on Insanity, whose duty shall be to visit, at least annually, the insane asylums, county poor-houses, and other institutions or places in which insane persons are treated, and observe whether the hygienic conditions and methods of treatment therein existing and pursued are in accord with the requirements of modern medical science."

Adopted.

Dr. Murdoch, of Pittsburg, read a paper on

THE RELATIVE VALUE OF MANIPULATION AND OTHER METHODS IN THE REDUCTION OF HIP-JOINT DISLOCATION.

After reviewing the principles involved in the production of dislocation of the femur, the lecturer showed that the method of reduction by rotation, flexion, adduction, and extension, or the reduction by manipulation, is in some cases inefficient. He referred, among other cases, to one in which he had succeeded in reducing the dislocation by extension and counter-extension after manipulation had been unsuccessful.

THE ADDRESS ON SURGERY

was delivered by Dr. H. L. Orth, of Harrisburg.

The principal topic selected by the lecturer was the operative treatment of intra-peritoneal hæmatocele. He reported a case which recovered after incision, drainage, and aseptic dressings.

SOME FURTHER CONSIDERATIONS ON TRACHEOTOMY

was the title of a paper by Dr. John H. Packard, of Philadelphia.

The difficulty of tracheotomy, and the operative skill required in its performance, will prevent it from ever becoming purely a medical operation. Still, the procedure may be simplified. Anæsthetics are unnecessary in cases of decided asphyxia. Chloroform he sometimes preferred to ether when an anæsthetic is required. The high incision in the trachea was recommended, the thyroid isthmus being drawn downward by a blunt hook. After carefully cleaning the trachea, he inserts the tube. The simplest is the best; the single tube he prefers if a skilled attendant be present. Topical applications, moist steam with borax, alum, chlorinated soda, permanganate of potassium, may be used with discretion. Nitrate of silver was not a favorite application, and too much lime-water is often used. Intubation of the larynx was described, and compared with tracheotomy, to the advantage of the latter.

Dr. Albert G. Heyl, of Philadelphia, made a very interesting address on ophthalmology, taking up the subject of

THE APPLICATION OF MOIST HEAT IN THE TREATMENT OF PURULENT OPHTHALMIA.

Since blindness is often caused by purulent ophthalmia, it is important for the physician to know its dangers and how they may be met. The conjunctival sac affords a favorable culture-ground for the gonococcus of Neisser and other bacteria which develop especially in the epithelium of the palpebral conjunctiva. This explains the clinical fact that the disease is best treated by applications of antiseptics to the everted lids. The lecturer recognized the utility of nitrate-of-silver applications, and the dangers from their careless use. He had also found that the development of the bacteria was greatly retarded by heat, and had obtained very gratifying results from hot moist applications made three times a day to the inflamed surface. He preferred the use of hot water on absorbent cotton, as a clean and efficient mode of application.

REMARKS ON FLAT-FOOT, WITH A DESCRIPTION OF THE MECHANISM OF A NEW PLANTAR SPRING FOR ITS RELIEF,

was the title of a communication made by Dr. A. Sydney Roberts, of Philadelphia, who exhibited a light plantar support made of tempered steel with a flange corresponding with the inner aspect of the foot, so as to maintain the perpendicular relations as well as the natural arch of the foot. This may be used in conjunction with other apparatus.

MISCELLANEOUS BUSINESS.

The Committee on Publication reported the publishing of the last volume of Proceedings, nineteen hundred copies having been printed and distributed to the County Societies.

The Treasurer, Dr. Benjamin Lee, reported a balance in his hands of $1755.96. The accounts were audited and approved.

Dr. Henry H. Smith moved that the Treasurer of this Society be instructed to invite the co-operation of Treasurers of County Societies in calling the attention of the members of the County Medical Societies to the importance of sustaining the efforts of the local Committee of Arrangements to give the members of the Ninth International Congress, by proper pecuniary aid, such social reception and entertainment as will be creditable to the medical profession of this great nation. Adopted.

The following motion was presented on behalf of Dr. Hiram Corson, with preambles reciting that in the State Hospitals for the Treatment of the Insane at Harrisburg, Danville, and Warren, the physicians were

charged with so many executive duties as to prevent them from giving to those under their care sufficient time and attention:

"*Whereas*, It is the sense of this convention of physicians, deeply interested in the welfare of the insane, and anxious that our State shall be second to no other in furnishing to these unfortunates the greatest attainable comfort and most efficient treatment; and believing that a change in management from that existing in the hospitals at Harrisburg, Danville, and Warren, where almost everything is in the control of the superintendent, to that of the eastern hospital (Norristown), in which the supreme authority and responsibility are with a board of trustees, would be an advance in the right direction: therefore be it

"*Resolved*, That a committee of —— persons be appointed by the President of this Society to memorialize the Legislature for such a change in the laws governing the hospitals named as will confer on the board of trustees full and exclusive power of management, and making it obligatory on the board to provide that the medical chief and his or her assistants shall perform such duties only as appertain to their office as practitioners of medicine and no other."

After the blank had been filled by insertion of the words "twenty-one," on motion of Dr. Cohen, the resolution was laid over until the next morning, when it was again postponed until next session.

Dr. J. V. Shoemaker delivered the

ADDRESS IN MEDICINE,

in which a number of subjects were discussed, showing evidence of progress during the year, and calling attention to the dangers of too exclusive specialism in practice, to some needed reforms in other directions, and especially in the hygienic conditions of mill-operatives. The address closed with a warm eulogy of the late Professor Austin Flint.

Dr. Traill Green read a paper on Hydrophobia, calling attention to the common mistakes in diagnosis, and advocating the study of supposed attacks of rabies in dogs. The dog should not be killed which is thought to be mad, for it may turn out that it has only distemper. He had not encountered in fifty years' practice a case of unmistakable hydrophobia.

Dr. J. H. Musser read a paper on "The Treatment of Summer Gastro-Intestinal Diseases of Children."

Dr. Frank Woodbury reported two cases of purpura hæmorrhagica, and called attention to the apparent causative action of quinine sulphate in ordinary medicinal dose in precipitating the attack: in one case this was observed on three separate occasions.

At the opening of the afternoon session the Nominating Committee presented its report, as follows:

For President.—R. Davis, M.D., of Luzerne County.

For Vice-Presidents.—Hobart Allport, M.D., of Clearfield County; Isaac N. Kerlin, M.D., of Delaware County; D. J. McKibbin, M.D., of Schuylkill County; W. B. Lowman, M.D., of Cambria County.

For Permanent Secretary.—William B. Atkinson, M.D., of Philadelphia.

For Recording Secretary.—H. Howard Hill, M.D., of Bradford County.

For Corresponding Secretary.—J. H. Musser, M.D., of Philadelphia.

For Committee of Publication.—William B. Atkinson, M.D., chairman, Benj. Lee, M.D., J. H. Musser, M.D., E. Jackson, M.D., all of Philadelphia; T. H. Helsby, M.D., of Lycoming County; A. Enfield, M.D., of Bedford County; W. G. Weaver, M.D., of Luzerne County.

For Judicial Council.—John H. Packard, M.D., of Philadelphia; John Curwen, M.D., of Warren County; A. H. Shaffer, M.D., of Mifflin County.

Next place of meeting,—Bedford, Bedford County.

Time,—Last Wednesday in June, 1887, at 9 A.M.

Secretary of Committee of Arrangements, S. H. Gump, M.D.

The Evening Session was devoted to the delivery of the Annual Address of the President, Dr. E. A. Wood of Pittsburg, on "Heredity and Education."

Third Day, Morning.—Session began at eight o'clock, Dr. Wood in the chair.

Dr. Wm. F. Waugh read an interesting and suggestive paper on

SOME RARE PSYCHIC SEQUENCES OF TYPHOID FEVER.

He cited the histories of several cases where the temper and habits of the patient were greatly changed by an attack of typhoid fever. In some cases actual insanity, or morbid mental traits, were developed. Such accidents are particularly likely to follow if the disease has been characterized by prolonged high temperature. He believed that a person never recovered full health after a severe attack of typhoid. He advocated the use of antipyretics, and great caution in the treatment of fever, so as to prevent relapses.

Dr. R. Leonard, of Carbon County, read the Address in Obstetrics.

Dr. T. V. Crandall discussed some "Additional Causes of Subinvolution of the Uterus," and papers were read by title on "Puerperal Convulsions," by Walter H. Parcels, of Mifflin, and on the "Antagonistic Drugs to be Employed in Typhoid Fever," by Dr. A. Enfield, of Bedford.

The President announced the following appointments for the next meeting: Frank Woodbury, M.D., to deliver the Address in Medicine; Charles S. Turnbull, M.D., the

Address in Ophthalmology; J. Z. Gerhard, M.D., the Address on Mental Disorders; J. B. Murdoch, M.D., the Address in Surgery; Samuel Wolfe, M.D., the Address in Obstetrics; J. D. Thomas, M.D., the Address in Hygiene and State Medicine.

The Secretary called attention to the fact that some of the names presented by the Nominating Committee as delegates to the American Medical Association were ineligible.

The following resolution was adopted:

"*Resolved*, That the Secretary drop from the list of delegates to the American Medical Association and to the several State Societies all those who are not eligible, and that the names be supplied by the officers of the Society; and that delegates be supplied to any State Society, from members of this Society who desire to attend, appointments to be made by the President and the Secretary."

Dr. Packard moved that all papers on scientific subjects be printed in the Transactions only by title. This was, on motion, laid over until the next meeting.

Dr. Parish moved that the order of programme at the next annual meeting shall be as follows: on the first day, surgery; on the second, practice of medicine; and on the third, obstetrics and diseases of children; and that at subsequent meetings the order shall be changed by rotation.

This was laid over, as an amendment, until the next meeting.

Dr. Jackson moved that a committee of five be appointed by the President to oppose any act for the restriction of vivisection which may be introduced before the Legislature. The President appointed Drs. E. Jackson, H. C. Wood, Frank Woodbury, A. M. Pollock, and J. T. Mays.

The following was offered by Dr. Benjamin Lee:

"*Resolved*, That this Society views with deep concern the efforts now being made to overthrow the National Board of Health, and urges upon the Representatives of this State in Congress the need of affording a generous support to that important department of the National Government."

Dr. Traill Green offered a formal vote of thanks to the retiring President for his able and impartial decisions, his faithful performance of duty, and his skill in preserving order at the meeting.

Thanks were also tendered the Committee of Arrangements, the Lycoming Medical Society, the Lady Managers of the Williamsport Hospital, and the Pennsylvania and Reading Railroads for reductions in rates for delegates attending the Society.

In the absence of the President-elect, the ceremony of installation was postponed until 1887. The Society then adjourned.

DR. SAMUEL SHOEMAKER has been elected Resident Physician to the Pennsylvania Hospital.

PHILADELPHIA ACADEMY OF SURGERY.

(Continued from page 726.)

DR. THOMAS G. MORTON presented a paper on "Unrecognized Asymmetry of the Lower Limbs as a Cause of Lateral Spinal Curvature." (See page 743.)

DISCUSSION.

Dr. J. Ewing Mears: The contribution made by Dr. Morton is certainly valuable if further experience confirms the conclusions which I believe he is prepared to draw so far as the treatment of these cases is concerned. His experience justifies him in saying that the application of a proper shoe will remove the asymmetry and the pains which accompany it. This is an important practical point. As he had said, it will be interesting to consider this question of inequality of the limbs in connection with the pain in the back so frequently complained of by females.

Dr. Goodman, who was present by invitation, said: During the past eighteen or twenty years I have paid a good deal of attention to this matter. I have found the train of symptoms pain in the back, lateral curvature, and scoliosis depending upon one limb being longer than the other. In many cases where pain in the back has been attributed to uterine troubles, I have secured relief by raising one foot. I think that if you examine into cases of lumbago you will find that with few exceptions there is lateral curvature, and that one limb is from one-fourth to half an inch shorter than the other.

Dr. F. H. Gross: I would ask Dr. Morton if he has noticed this condition of curvature in the adult, following fracture with shortening.

Dr. Morton: We do not let adults or children with a broken thigh get well with shortening. At the Pennsylvania Hospital we have become so satisfied that the limb is of the proper length that as a rule we have discontinued measuring. I do not recall an example within a long time where there has been shortening. Still, I admit that shortening is possible. In the adult I think that there would not be the same disposition to shortening as in the growing child. The cases which I have seen have been coming on during the growth of the individual. The change in the spinal column would more naturally occur during that period than in more advanced life.

Dr. William Hunt: Sir James Paget, who has been quoted to-night, wrote to me at the time I wrote one of these articles, that he had given up measurement of the limbs, and depended upon the eye and upon manipulation. When he found by manipulation that it was in proper position, and when it looked right, he paid little attention to how the heel was, and his results had been as good.

It is a difficult matter to measure correctly,

and in measuring we must always make allowance for the fact that the left side is always smaller naturally than the right. The difference, therefore, should be very marked to be looked upon as pathological. I have no doubt that the condition of right-handedness depends upon the fact that the right hand is the strongest from the beginning, and infants use it because it is the strongest. During fœtal life there is a greater supply of blood to the right side, and thus it receives more nutriment, and this may account for its greater development. If we had the history of a left-handed person, we should probably find that there had been some reason why the right hand was not used during infancy. There is no such thing as symmetry in organic nature, and I doubt whether it exists in crystals even.

Dr. Nancrede: In these cases the curvature had lasted at least eighteen months or two years, for the pain had been present that length of time. If there had been true lateral curvature existing that long, I should think that rotation would have occurred. The fact that the symptoms have disappeared within a short time after the use of an elevated shoe would render the existence of true rotatory curvature improbable.

Dr. De Forest Willard: There is a great difference between the cases shown to-night and true lateral curvature. There is no rotation in these cases. This is simply a balancing of the body so as to throw the centre of gravity between the two limbs. We see this in cases of infantile paralysis, and also in all individuals when standing at ease. I do not consider these pathological. They are merely mechanical conditions. When these individuals bend forward, they do not show rotation of the vertebræ. If the difficulty can be relieved by simply elevating the limb, there is no pathological condition. These two cases have undoubtedly had the condition many years, but no rotation has been produced. I have never seen .1 per cent. of cases of infantile paralysis develop permanent lateral curvature.

The point with reference to the effect of this curve in producing pain is, I think, well taken. This is probably due to compression of the intervertebral bodies, or to the unequal action of the muscles. In true lateral curvature we have not the twisting which is seen in these cases. That would seem to explain the difference in these two classes.

Dr. Goodman: I am convinced that the great majority of cases of lateral curvature are due to one limb being longer than the other. Although this may not be true lateral curvature, it grows in time to be true lateral curvature. I have a patient who is very much bent. One limb is longer than the other. This has been coming on for years. This asymmetry will frequently be found to be the cause of sciatica.

Dr. Morton: It was not intended to show these cases as examples of rotatory curvature. In the case which I showed the College of Physicians there was curvature with rotation of the vertebræ. This had originally been a case of simple curvature in which one limb was one and seven-eighths inches shorter than the other. I believe that the two cases presented to-night would, if nothing were done for their relief, pass into the condition which Dr. Goodman has described.

Dr. O. H. Allis: Dr. Schaeffer does not believe in want of symmetry as a cause of lateral curvature. He has seen many cases of true lateral curvature, but he has not found any marked asymmetry. He has examined many cases where there was great disparity in the limbs, but has not found lateral curvature. That a disparity in the length of the limbs will produce a curve is apparent to any one. Although the patients presented to-night have walked about through all the period of soft bone, they have not developed rotatory lateral curvature. I do not believe that this asymmetry will produce rotatory lateral curvature to any extent or at any period. Where a limb is amputated, the artificial limb must be a little shorter than the normal limb; yet we do not find that these cases develop rotatory lateral curvature.

COMPOUND FRACTURE OF THE MALAR BONE.

Dr. F. H. Gross: I have here a case of compound fracture of the malar bone. The man fell between some revolving wheels in a marble-shop. The eyebrow was cut through, a portion of the upper lid was cut through, and the right malar bone was torn from its four attachments; the bone was entirely loosened, and there was considerable hemorrhage. After the hemorrhage was checked the bone was raised into place, but the masseter muscle at once drew it out of place. I then drilled a hole through the external angular process of the frontal bone, and another through the corresponding process of the malar bone, and wired the two together. This was sufficient to keep the bone in place. After the union became firm I removed the wire. The upper eyelid was torn into shreds, the conjunctiva torn, and the lachrymal sac torn down, but the globe escaped and the eyesight is not impaired. The result is so good that I thought it would be interesting to show it.

CELLULITIS OF THE ARM CHECKED BY LIGATURE OF THE BRACHIAL ARTERY.

I alluded to this case at the last meeting. Five months ago he was kicked by a horse, the middle finger being injured. The part was treated by an apothecary, but the condition grew worse. He then consulted a physician, who called in a surgeon. Cellulitis had been established, and the arm was greatly inflamed and very painful; the patient had chills, fever, and delirium; an abscess formed

about the wrist. There was violent hemorrhage from this point. The radial artery was tied above, but the hemorrhage continued, and probably came from the anterior interosseous artery. Esmarch's bandage was then applied, and the man was sent to the hospital. The arm was immensely swollen, and looked as though it were becoming gangrenous. I at once tied the brachial artery. Within twelve hours the cellulitis below the seat of ligature entirely melted away. While the cellulitis disappeared below, an abscess formed above which opened into the incision made for the application of the ligature.

DISCUSSION.

Dr. O. H. Allis: I have had one case of depressed fracture of the malar bone. I took a common awl, drilled a hole in the bone, and inserted a carpenter's screw and elevated the bone. The case did perfectly well.

Dr. Nancrede: I would call the attention of the Society to the importance of replacing the bone in such a case as Dr. Allis has described. I saw in consultation with Dr. Arthur Meigs a case in which a compound comminuted fracture of the malar bone had been allowed to take its own course. The man suffered greatly from pressure upon the nerve. This was five weeks after the injury. By pressure the bone could be forced down upon the nerve, increasing the pain. Elevation of the bone would to a certain extent relieve the pain and numbness.

Dr. De Forest Willard: The question of elevation is of importance not only to improve the appearance, but to relieve pain. A few weeks ago I had a case in which the malar bone, the infraorbital process of the superior maxillary, and the wall of the antrum had been driven backward by the kick of a horse. I introduced a blunt hook and removed a great deal of the deformity. While the case has not yet recovered, there has been no pain.

NEW INSTRUMENT FOR NEURECTOMY.

Dr. Thomas G. Morton: I wish to exhibit an instrument to be used in cutting the second branch of the fifth nerve. The object of this is to divide the nerve farther back than anything we already have will do. My usual plan, after making the facial incision, is to collect the diverging filaments of the nerve and put them on the stretch; then with the bone-forceps I cut a small wedge corresponding with the edge of the orbit; the filaments are then tied together and drawn upward; then apply the crown of the trephine and break open the canal; then break down the posterior wall of the antrum and cut the nerve as far back as possible with blunt scissors.

The instrument which I present consists of a tube with an opening in its wall near the end. The fibres of the nerve are gathered up and passed in the end of the instrument and through this opening. A sliding knife surrounds the tube, and, when the instrument has been pushed to the required depth, the knife is pushed down and the nerve divided. This will diminish the risk from hemorrhage.

DISCUSSION.

Dr. J. Ewing Mears: If Dr. Morton intends to push this instrument back to the foramen rotundum, there may be danger of drawing Meckel's ganglion into it: the branches to this ganglion may permit this.

Dr. J. R. Levis: My plan, after opening the canal and isolating the nerve, is to seize it with forceps and draw it forward. I can then follow it back with another pair of forceps as far as I wish and break it off. I think the stretching thus accomplished is of service.

Dr. F. H. Gross: I have performed this operation twice. I prefer Wagner's operation. There is no need of mutilating the superior maxillary bone. After the periosteum of the floor of the orbit is raised, the track of the nerve can be easily seen; the roof of the infra-orbital canal can readily pried up with a probe. The artery runs with the nerve through this portion of its course, and if there is any hemorrhage the canal can be plugged for a few minutes. When the clear part of the nerve is reached, the artery separates from it. I have not cut the nerve behind Meckel's ganglion, but I believe that I could do it.

Dr. Morton: I have done the operation described by Dr. Gross, but I have been unable to get back as far as I wished. Dr. Agnew stated to me that he had abandoned all other operations, and resorted to this in order to get farther back.

Dr. J. Ewing Mears: I think that we must agree with Dr. Morton that the operation of Carnochan, which he has described, is the best, as giving the most working room.

TUMOR OF MEDIAN NERVE.

Dr. Mears reported a case of removal of a tumor from a patient in St. Mary's Hospital, which involved the median nerve and gave rise to unusual symptoms.

Dr. Hoban, resident physician, prepared the following history:

J. L., married, aged 52, German, came to hospital on May 4, 1886, with a painful tumor situated below the right clavicle. The growth was first noticed about eight years ago; at that time it was about the size of a marble, and painless. It continued to grow slowly until three years ago, when the patient, being sick with pneumonia, was bled at the bend of the right elbow. The tumor then began to grow more rapidly, and is now the size of a large hen's egg.

Pain was first felt two years ago: beginning in the tumor, it went down the inner side of arm, anterior part of forearm, and end of thumb and first finger, also upward behind the ear; on right side of neck there is a slightly-enlarged gland, which grows larger as the pain

in the tumor increases. There is no history of traumatism, but the patient was accustomed to carry heavy baskets upon her arm. She had the tumor painted with tincture of iodine while outside, but it did not have any action as to pain or size of growth.

The heart-sounds are heard distinctly over the tumor; with fingers in axilla the tumor can be moved; in carrying the arm forward the tumor sinks; moving the arm backward, the tumor projects; there is perfect sensation in forearm and hand; the greatest and constant pain is in the biceps muscle: this pain, however, is relieved by pressure; there is no pain on posterior part of arm or forearm, but pain is marked and constant on bending the elbow; the right radial pulse is tense, corded, and stronger than left; right ulnar pulse is wanting; the veins of right arm are more prominent than left; evidences of venous obstruction on back of hand, also on anterior and posterior forearm and anterior of arm.

The tumor was removed on May 11. It was about the size of a hen's egg, and situated immediately above and upon the axillary artery and connected with the axillary plexus of nerves.

After coming from under the influence of ether, the patient complained of numbness in the thumb and forefinger, which before the operation were the seat of great pain.

She still complains of pain in the thumb and forefinger, but in no other place; she also complains of numbness in the thumb and forefinger, being unable to hold a needle.

The interesting point in this case was the peculiar position of the pain. There was some doubt as to the character of the growth, —whether it was a fibro-neuroma involving the nerve, or whether it was a sarcoma implicating a portion of the median nerve. A curious symptom was the pain in the anterior surface of the arm. The median nerve distributes no branches to the arm. In the forearm the anterior muscles, with the exception of the inner half of the flexor profundus and flexor carpi ulnaris, are supplied by branches of the median nerve; the thumb, the index-finger, and the radial surface of the ring-finger are supplied by the median nerve. The pain was limited to the anterior surface of the arm, of the forearm, and the thumb and index-finger. I inferred from this that the entire nerve was not involved. I was not able to explain the pain in the biceps region, unless on the view that it was a diffused pain from the involvement of the nerve-trunk itself.

In performing the operation, I made the incision necessary for applying ligature to the first part of the axillary artery. I found the tumor beneath the costo-coracoid membrane in the position of the first part of the axillary artery. It was firmly attached to the nerve; the nerve ran in the capsule of the tumor; removal of the tumor exposed the first portion of the axillary artery. The tumor was examined by Dr. William Osler, who decided that it was a sarcoma. I was unable to find any explanation for the absence of the pulsation in the ulnar artery, which still exists.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held June 3, 1886, the President, A. Jacobi, M.D., in the chair.

INFLUENCE OF SURGERY UPON OBSTETRIC ART.

Dr. Charles C. Lee read the paper, in which he said that to those who practised obstetrics and gynæcology nothing was more impressive than the rapid inroads of surgery into a domain heretofore deemed strictly medical. He asked, Is this just or natural? A distinguished Fellow of the Academy (Dr. Fordyce Barker) was known to deprecate this tendency of the day, and to feel it a mistake that gynæcology and obstetrics should so frequently invoke the aid of the scalpel.

It must be evident that obstetrics had been practised as an art from the earliest ages. Although at first its methods were rude and uncouth, it kept pace with advancing civilization, and the history of every nation of Europe and of the East teemed with evidence of this fact. At an early date obstetrics and surgery were practised in common, but by degrees the former gradually passed into the hands of women. In most serious cases, however, the surgeon was still consulted. But obstetrics became gradually a distinct specialty, and its practice was again resumed by men all over Europe.

Dr. Lee then reviewed briefly what had already been accomplished by surgery in the obstetric art, and upon this review he said we could base our opinion as to what its influence would be in the future. First, with regard to Cæsarean section, the most complete statistics and valuable deductions regarding this operation were to be found in the writings of Harris, of Philadelphia. Dr. Lee thought Cæsarean section had undoubtedly been performed in ancient times, but the first unquestioned case was that of Trautmann, 1610. The author mentioned the indications for the operation, and said the great risks which it incurred were evident from the fact that the general mortality following it in this country was sixty per cent., and in Great Britain eighty per cent. The chief causes of death had been delay, with shock and exhaustion following it, peritonitis, septicæmia, and, rarely, hemorrhage. Dr. Lee gave the steps of the operation as tabulated by Dr. Lusk, and then spoke of four modifications of it, all suggested by Germans,—namely, that by Frank, of Cologne, 1881, that by Kehrer, of Heidelberg, 1882, that by Sunger, of Leipsic, 1881, and that by Cohnstein, of Heidelberg.

The latter method had never been practised, and Dr. Lee thought the objections to it were such that it probably would never be undertaken.

The substitutes for the Cæsarean section were the Porro operation and its modifications by Müller and Veit, and laparo-elytrotomy as performed by Dr. Thomas, of New York. The Porro operation consists essentially of amputation of the uterus at the cervix and removal of the ovaries. Neither of the modifications of this method had been followed by sufficient success to justify the hope that they would supplant the original operation of Porro. Up to this time Veit's operation had shown a general mortality of 71.5. According to Harris, up to March, 1885, there had been forty-two operations by Müller's modification, with twenty-one mothers and thirty-one children saved; by the original Porro method, one hundred and nine operations, with forty-six mothers and eighty-five children saved.

Of laparo-elytrotomy it seemed hardly necessary to say much before the Academy, where Dr. Thomas had made the first chief exposition of the subject. Its special object and merit was the extra-peritoneal extraction of the child above the pelvic brim without wounding either the uterus or the peritoneum, and consequently without risking the mortality which had hitherto followed these lesions. As to its results, he need only add that Skene and Jewett, of Brooklyn, Gillette and Thomas, of New York, and Hines and Edes, of England, had all had successful cases. Although the number was yet small, the proportion of successes was greater than that of either the Porro operation or Cæsarean section.

Surgery had rendered valuable assistance in extra-uterine pregnancy; indeed, its greatest triumphs had been won in this field, and each year there came gratifying evidence of improvements in the methods and technique of such operations. Before the fifth month of ectopic gestation, electricity (first employed for this purpose by Allen, of Philadelphia, and since popularized by the writings of Thomas, Rockwell, and Garrigues) was preferred in this country to the knife; after this period the measures to be chosen were either laparotomy, laparo-cystotomy, or laparo-cystectomy.

Dr. Lee referred briefly to lacerations of the cervix and perineum, and said regarding the former that he had never succeeded in the primary operation, nor did he know of more than one surgeon who claimed to have obtained success. But, with our constantly-improving appliances and resources, that this would be accomplished in the early future he firmly believed. Regarding lacerations of the perineum, however extensive they might be, and whether complete or incomplete, the case was very different. Here the advantages of immediate closure were so immense in saving the patient from the unfortunate discomforts of prolapse and the greater misery of procidentia of the womb that the obstetrician was derelict in his duty who failed to avert these by immediately repairing the perineal tear.

Suffice it to say, in conclusion, that if the application of surgical resources to obstetrics in the ten or twenty years just past had been so beneficent, we had no cause to fear that the future would be less productive of good. So firm was the foothold which obstetric surgery had now obtained that one need be no optimist to believe its future outcome would be more brilliant than any of its past achievements.

DISCUSSION.

Dr. W. M. Polk referred to the struggle which the obstetrician had been compelled to undergo in order to attain to his present enviable position. That his present position could be considered enviable would be accepted by all, when they considered the results which had been obtained by the obstetric surgeon in abdominal surgery. When the day should arrive, and he believed it would arrive speedily, that the most repulsive of all operations—namely, the destruction of the life of the child—should be eliminated by successful Cæsarean section, then we could say that the greatest work in surgery belonged to the obstetric physician. Dr. Polk disapproved of the primary operation for laceration of the cervix uteri. Many of us had seen extensive lacerations, extending even into the vaginal wall, heal under simple cleanliness; and this was one of those cases proper to leave to the efforts of nature for repair.

Dr. Fruitnight said it was true many cases of laceration of the perineum recovered under simple cleanliness, but he thought union was much more likely to take place if it were immediately repaired.

Dr. Fordyce Barker thanked the gentlemen who had referred so kindly to the benefit which they had obtained from his conservative teaching; he was willing to accept the position which they had assigned to him,—namely, that of the midwife rather than that of the obstetric surgeon. He would now for the first time express an opinion, which had come to be a pretty definite one, regarding the primary operation for laceration of the perineum. He was not constitutionally disposed to accept new propositions simply because they were new, nor was he disposed to doubt their truth; but he preferred to wait and watch, and form an opinion after studying the matter a good while. So he had done regarding this operation. Some years ago he had listened to a gentleman eminent in the profession who stated it as his belief that any physician who did not close by immediate operation the lacerated perineum neglected his duty. This statement seemed to him a strong one, but he made up his mind to

watch and see what would be the decision of time. He would venture to say to-night, although it might seem audacious to do so, but he would challenge contradiction, that in no case of confinement which he had attended had the secondary operation for laceration of the perineum ever been performed. He was quite positive that this statement was correct regarding patients in private practice; hospital patients he had not followed so closely. He would not say that he had had no lacerations, for he had; but he watched them, observed cleanliness, saw that the functions of the system were properly performed, and the patients had recovered without the necessity for an operation. In only one of his cases had the primary operation been performed, and in that instance union did not take place. The laceration was extensive. This occurred last winter, when a peculiar epidemic prevailed. The woman did well for the first six days after confinement, when an explosion took place: the temperature rose suddenly to 105° or 106° F., the breathing became rapid, the pulse went up. He saw forty-one cases, all in consultation except the one just referred to. In five cases the primary operation for lacerated perineum was performed, and in only one did union take place. This patient, however, died about four weeks later, being the only one of the forty-one who died. Dr. Barker had witnessed the operation by others, and in some instances there was profuse hemorrhage due to the shock, exhaustion, and disturbance. He thought, therefore, that as a rule it was better to leave the rupture to nature to repair, observing, however, cleanliness and attention to general health.

Dr. MALCOLM MCLANE, in all respect to Dr. Barker, still thought that the cases did better when a deep suture of stout silk was inserted, without giving the patient much disturbance: indeed, he found that at the present day the obstetrician was blamed if he left a tear without repairing it.

Dr. BOLDT thought the cervix uteri should not be repaired just after delivery unless there were profuse hemorrhage.

Dr. POLK replied to a question by Dr. Barker, that he still favored immediate repair of the lacerated perineum unless there were unusual shock and exhaustion.

Dr. LEE did the operation while the patient was still under chloroform.

ICE-CREAM POISONING.—Accounts have appeared in the daily press of two epidemics of poisoning by ice-cream at picnics in New Jersey, and more recently in Illinois. These have been attributed to tyrotoxicon, or poisoning by a toxic agent lately discovered by Dr. Vaughan in putrid cheese; but a more reasonable supposition would be to ascribe them to egg-poisoning, with which toxicologists are familiar.

REVIEWS AND BOOK NOTICES.

THE INTERNATIONAL ENCYCLOPÆDIA OF SURGERY. A SYSTEMATIC TREATISE ON THE THEORY AND PRACTICE OF SURGERY. By Authors of Various Nations. Edited by JOHN ASHHURST, JR., M.D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-Lithographs and Wood-Cuts. In Six Volumes. Volume VI. New York: Wm. Wood & Co., 1886, pp. 1272.

The subjects treated of in the concluding volume of this magnificent treatise are Injuries and Diseases of the Œsophagus, by J. Solis Cohen, M.D.; Intestinal Obstruction, by John Ashhurst, Jr., M.D.; Injuries and Diseases of the Rectum, by William Allingham, F.R.C.S.; Urinary Calculus, by E. L. Keyes, M.D.; Lithotrity, by William H. Kingston, M.D., D.C.L., etc.; Injuries and Diseases of the Bladder and Prostate, by Reginald Harrison, F.R.C.S.; Injuries and Diseases of the Urethra; Injuries and Diseases of the Male Genital Organs, by H. Royes Bell, F.R.C.S.; Injuries and Diseases of the Female Genitals, by Theophilus Parvin, M.D.; The Cæsarean Section and its Substitutes; Laparotomy for Ruptured Uterus and for Extra-Uterine Fœtation, by Robert P. Harris, A.M., M.D.; Ovarian and Uterine Tumors, by Charles Carroll Lee, M.D.; Inflammatory Affections of the Bones, by L. Ollier, M.D.; Scrofulo-Tuberculous and other Structural Diseases of Bones, by Eugene Vincent, M.D.; Tumors of the Bones, by A. Poncet; and Orthopædic Surgery: the Treatment of Deformities, by Frederic R. Fisher, F.R.C.S. Articles on Construction and Organization of Hospitals, by Edward Cowles, M.D.; Preparation of Military Surgeons for Field Duties: Apparatus Required, Ambulances, Duties in the Field, by Bennett N. Clements, M.D., U.S.A.; and A History of Surgery, by George Jackson Fisher, A.M., M.D., are contained in an appendix. The work is handsomely printed on toned paper, and abundantly illustrated, the lithographs in colors being exceptionally well done.

DICTIONARY OF PRACTICAL SURGERY. By Various British Hospital Surgeons. Edited by CHRISTOPHER HEATH, F.R.C.S. Vol. I., ABDOMEN—LYMPH SCROTUM. Vol. II., MACROGLOSSIA—ZYGOMA. (Two volumes in one.) Philadelphia, J. B. Lippincott Company, 1886, pp. 970 and pp. 884. Octavo.

This work is a Cyclopædia of Surgery, the articles being condensed and reduced to the smallest practical limits consistent with clearness and completeness. The contributions are very generally signed with the names of their authors, who are recognized as among the leaders of English surgery and medicine. In nearly two thousand double-column pages

a very large amount of matter is contained, giving the modern views on surgical and allied topics in a manner most convenient for reference. No space is devoted to illustrations or diagrams. After examination of the work, its plan seems to have been happily conceived and admirably executed. It is invaluable for the general practitioner and student, who requires much in little room.

NEW REMEDIES AND CLINICAL NOTES.

Recent Advances in the Methods of Studying the Heart.—Dr. William Gilman Thompson (*Buffalo Medical Press*), in his recent studies of the heart, has succeeded in getting very good views of it in full diastole, systole, and in numerous intermediate contractions, not only of normal hearts' action, but also of those in which contractions had been intensified by drugs, as digitaline hypodermically, nitro-glycerin topically, and irritation, etc. The *modus operandi* is as follows. The animal is etherized, the chest is laid open, and hemorrhage is checked as far as possible. The pericardium is removed, and a small slip of celluloid is slipped behind the heart like a collar. A spray of warm (physiological) salt-solution keeps the heart from drying. The celluloid simply relieves the heart from the adjacent tissue so that its action is not impeded. Artificial respiration should be maintained. The heart is illuminated by direct sunlight and photographs are taken with an "instantaneous drop-shutter" on gelatin dry-plates, giving an exposure of about one-tenth of a second.

Administration of Potassium Iodide in Aerated Water.—It is recommended to use carbonic-acid water as a vehicle for iodide of potassium. The solution is said to be tasteless. Precautions should be used to have a water freed from impurity, by double distillation if necessary, before charging it with from two to five per cent. of the gas.—*St. Petersburger Med. Woch.* [Milk is a good vehicle for either potassium or sodium iodide.]

MISCELLANY.

Dr. Benjamin Lee, Secretary of the State Board of Health of Pennsylvania, has removed his office to No. 1532 Pine Street. He continues to reside in Germantown.

Summer Diarrhœa.—In the large class of summer diarrhœas of children and adults, with griping in the bowels and flatulence, the use of Listerine, in doses varying from ten drops to a teaspoonful (with or without water), has a most salutary and pleasing effect.

It can be administered at short intervals after eating, as soon as regurgitation, distention, or acidity occurs. Its action in arresting excessive fermentation is prompt; besides, it exercises a decided sedative influence on the mucous membranes of the stomach.

The thymol, menthol, and boracic acid, which, with the quota of alcohol necessary to their proper admixture, form the principal elements of Listerine, lend to this compound a special value in this class of cases.—*New York Medical Journal.*

A Valuable Form of Nourishment for convalescents and infants is Reed & Carnrick's Soluble Food. It is a preparation which contains the necessary principles in a combination easy of assimilation, and has the advantage of requiring only water as a vehicle. For patients requiring a tonic as well as condensed nourishment, the Beef-Peptonoids with Coca is especially adapted.

A Pasteur Institute in New York.—Dr. Valentine Mott, Jr., has treated a case by Pasteur's method. The bites were inflicted by a dog which was apparently rabid, and they were on a part of the body usually covered by the clothing. Only a few days elapsed before the first inoculation was made. The details of this case will appear in our New York correspondence.

Fluid Extract of Pinus Canadensis (Kennedy's) is a useful astringent for morbid states of the mucous membrane accompanied by excessive discharge. Properly diluted, we use it constantly in sprays and douches for the naso-pharynx, as an application to enlarged tonsils with relaxed uvula, and as an injection for leucorrhœa.

Colden's Liquid Beef Tonic has been suggested and used with good effects in cases of exhaustion, when digestion is feeble and food must be given in an easily assimilable form.

Dr. J. Chalmers Da Costa has been elected Assistant-Physician in the Insane Department of the Philadelphia Hospital.

NOTES AND QUERIES.

MEETING OF STATE MEDICAL SOCIETY.

Mr. Editor,—In your editorial of June 12, 1886, you suggest several matters which would add to the efficiency of the work of the State Medical Society. Allow me to add one or two suggestions which it seems to me would be of decided advantage to all concerned.

First. A return to the old practice which prevailed for so many years in the earlier meetings of the Society, of having the President's address delivered immediately after the organization on the first day, and that said address should be on some medical subject of interest.

Second. That the Committee on Nominations be named early on the first day, so that it could meet in the evening, and thus enable the members to attend the regular sessions and hear the papers read. Many, if not all of them, would like to hear the addresses and papers, which cannot be done

when the committee spend all the forenoon out of the hall in which the meetings are held.

Third. That there should be some one with the Committee on Registration who is familiar with the mode of proceeding and acquainted with the names and persons of many of the members, so as to facilitate registration; and that the room should be so arranged that the members could readily pass in at one door and out at another, and thus keep the line in steady movement.

Fourth. That the old practice of each member entering his name and other particulars in a book provided for that purpose, as in earlier days was done, would be more likely to secure correctness.

Very respectfully, yours,

JOHN CURWEN, M.D.

WARREN, PENNSYLVANIA, June 19, 1886.

ANTIPYRIN IN DISORDERED STOMACH.

MR. EDITOR,—Some time since I was called to see a patient suffering from an excessively sensitive stomach. Nothing would be retained. This condition had lasted two days when I saw the case. Everything, almost, had been used, with no avail. I found the patient exhausted, and a temperature of 102½°. Knowing quinine would be vomited, I ordered three-grain doses of antipyrin, with a view to lowering the temperature. To my satisfaction, the drug was retained by the stomach, and seemed to have a sedative effect on that organ, as there was no vomiting after the first dose.

This called my attention to the drug as a remedy for obstinate vomiting, and I used it in the following cases with beneficial results.

No. 2: young woman, 24, vomiting from pregnancy. This trouble often baffles all medication. Antipyrin in four-grain doses to be taken each morning before rising was my treatment, and after the second day there was no further trouble, except when the medicine was not taken, when the vomiting would return.

Nos. 3 and 4: two children, 13 months and 2 years, both suffering from disordered stomach incident to teething, which were both controlled by this drug after other remedies had failed.

I think the above cases warrant me in giving to the profession my experience with this remedy, and would be pleased to hear of the effect produced in the hands of others.

THOMAS B. MCBRIDE, M.D.

2022 EAST SUSQUEHANNA AVENUE, June 25, 1886.

DIRECTIONS FOR USING THE SELF-REGISTERING CLINICAL THERMOMETER.

The thermometer is in working order and always ready for application when the top part of the small bit of mercury that forms the index is below the arrow-point. After using it, and in order to bring the index again below the arrow-point and ready for use, take the top part of the stem of the thermometer (near the 105) between the thumb and the first fingers, with the bulb turned downward or inclined towards the floor. In this position, quietly swing from you (like a pendulum) from the elbow down; let the wrist hang as loose as possible; always look at the position of your index after each swing until you again see the top part of it below the arrow-point, and it is again ready for application. If it be found that one or two quiet swings are not sufficient to bring the top part of the index below the arrow-point, let your swing be somewhat forcible. By following these directions, you will have little or no trouble with your thermometer.

JNO. BARRY.

62 FULTON STREET, NEW YORK.

OBITUARY.

SQUIER LITTELL, M.D., a resident of Philadelphia for many years, and at one time prominent in the profession, died at Burlington, New Jersey, July 6, in the eighty-second year of his age. He was graduated in 1824 from the Medical Department of the University of Pennsylvania, and for some years practised medicine in Buenos Ayres, and was a licentiate of the Academy of Medicine of that city. He was a Fellow of the College of Physicians of Philadelphia, and formerly a member of the Philadelphia Medical Society. He was formerly a frequent and valued contributor to medical journals, and in 1828–29 edited *The Journal of Foreign Medicine*. He was a member of the surgical staff of the Wills Hospital from 1834 to 1864, when he resigned and was elected Emeritus Surgeon to the institution. For a number of years he had retired from practice.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JUNE 20, 1886, TO JULY 3, 1886.

COLONEL GLOVER PERIN, ASSISTANT SURGEON-GENERAL U.S. ARMY.—Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 54, Department of Dakota, June 14, 1886.

COLONEL THOMAS A. MCPARLIN, SURGEON.—Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 146, A. G. O., June 25, 1886.

LIEUTENANT-COLONEL CHARLES PAGE, SURGEON.—Leave of absence extended ten days. S. O. 146, A. G. O., June 25, 1886.

LIEUTENANT-COLONEL D. L. MAGRUDER, SURGEON.—Granted leave of absence for two months, to take effect on or about July 1, 1886. S. O. 146, A. G. O., June 25, 1886.

PROMOTIONS:

LIEUTENANT-COLONEL JOSEPH B. BROWN, SURGEON.—To be surgeon, with the rank of colonel, June 24, 1886.

MAJOR ANTHONY HEGAR, SURGEON.—To be surgeon, with the rank of lieutenant-colonel, June 24, 1886
Circular A. G. O., June 28, 1886.

MAJOR JOHN BROOKE, SURGEON.—Ordered for duty as post-surgeon, Fort McHenry, Baltimore, Maryland. S. O. 67, Division of the Atlantic, June 23, 1886.

MAJOR RICHARD S. VICKERY, SURGEON.—Assigned to duty as surgeon in charge of Army and Navy General Hospital at Hot Springs, Arkansas. S. O. 150, A. G. O., June 30, 1886.

MAJOR CALVIN DE WITT, SURGEON.—Ordered for duty in Department of Dakota. S. O. 142, A. G. O., June 21, 1886.

CAPTAIN JOHN DE B. W. GARDINER, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Newport Barracks, Newport, Kentucky. S. O. 67, Division of the Atlantic, June 23, 1886.

CAPTAIN ROBERT J. GIBSON, ASSISTANT-SURGEON.—Granted leave of absence for thirty-five days. S. O. 43, Division of the Pacific, June 14, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM JUNE 20, 1886, TO JULY 3, 1886.

GROVE S. BEARDSLEY, MEDICAL INSPECTOR.—Detached from the Navy Yard, Norfolk, and ordered to the "Brooklyn."

G. A. BRIGHT, SURGEON.—Detached from the "Brooklyn" and ordered to Navy Yard, Norfolk.

E. H. GREEN, PASSED ASSISTANT-SURGEON.—Ordered to Naval Laboratory at Brooklyn, temporary duty.

J. M. BROWN, MEDICAL INSPECTOR.—Member of Retiring and Examining Board.

F. N. OGDEN, ASSISTANT-SURGEON.—Ordered to "Juniata."

C. A. SIEGFRIED, SURGEON.—Three months' leave abroad.

J. H. H. HALL, PASSED ASSISTANT-SURGEON.—Detached from the Museum of Hygiene and ordered to the Naval Hospital at Brooklyn.

A. R. WENTWORTH, ASSISTANT-SURGEON.—Detached from the "St. Louis" and ordered to the "Brooklyn."

CORBIN J. DECKER, ASSISTANT-SURGEON.—Ordered to the "St. Louis."

T. O. BERRYHILL, ASSISTANT-SURGEON.—Ordered to the Museum of Hygiene.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING JUNE 26, 1886.

SAWTELLE, H. W., SURGEON.—To proceed to Wilmington, California, on special duty, June 22, 1886.

WHEELER, W. A., PASSED ASSISTANT-SURGEON.—Granted leave of absence for thirty days, June 23, 1886.

WILLIAMS, L. L., ASSISTANT-SURGEON.—To proceed to Buffalo, New York, for temporary duty, June 24, 1886.

NORMAN, SEATON, ASSISTANT-SURGEON.—To proceed to Cleveland, Ohio, for temporary duty, June 26, 1886.

PHILADELPHIA, JULY 24, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE ON PERIOSTITIS.

Delivered at the College of Physicians and Surgeons, Chicago, Illinois,

BY N. SENN, M.D.

(Milwaukee, Wisconsin),

Professor of the Principles and Practice of Surgery and Clinical Surgery.

Reported by WILLIAM WHITFORD.

GENTLEMEN,—We commence, this morning, the subject of the inflammatory diseases of bone; second only in importance to the subject of fractures. It is well, before calling your attention to the pathological questions involved in this class of diseases, to refer very briefly to the peculiarities of bone-structures as compared with those of the soft parts. The periosteum is a fibrous membrane surrounding bone, all the bones being covered by this structure, with the exception of the internal surface of the cranium and the articular surfaces of bone. Fibrous and unyielding in character, it is divided histologically and anatomically, as well as from a pathological stand-point, into two distinct and well-marked layers,—namely, the *external layer*, consisting of a stroma or nidus of connective tissue, with its fibres arranged both parallel and reticular, and the *internal* or *osteogenetic layer*,—the so-called condima of Billroth,—composed of a layer of cells which we term osteoplasts, and which are attached to a fine reticulum of connective tissue between the external and the internal layer, which also constitutes the portion of the periosteum destined to furnish material for the production and growth of bone. If we consider the denseness of the structure, its attachment to the subjacent bone, and more particularly the anatomical relations existing between the vascular supply of the periosteum and the bone proper, we can readily imagine that any disease affecting primarily the periosteum or the bone is destined to affect the remaining structure by extension of the disease along the fibrous tissue and blood-vessels, from the periosteum to the bone or from bone to periosteum. The older pathologists taught that whenever bone was denuded of its periosteum it was invariably destined to become necrosed, believing that the essential vascular supply was furnished by the periosteum. Clinical observation, however, has shown that the vascular supply derived from the periosteum is not essential to the nutrition and growth of the subjacent bone. It has been distinctly observed, taking the case of the shaft of a long bone, that if a ring of periosteum be removed under proper antiseptic precautions, and if, after the healing of the wound, the bone be fractured at this particular point, the formation of a callus progresses the same as though the periosteum had not been injured or removed, showing conclusively that the callus, which is destined to unite the fractured ends of the bone, is not derived from the condima, but from the fractured surfaces of the bone itself.

Great confusion has existed in classifying inflammatory diseases of bone. At one time pathologists believed that all inflammatory diseases of bone originated in the periosteum. It is well to state that, as a primary disease, periostitis is exceedingly rare; as a secondary affection, it occurs with almost every form of inflammation which affects bone. Again, it was assumed that inflammation had its starting-point in the bone-substance proper: hence we read and hear so much of osteitis. Later research, however, and the results of experimentation have shown that ninety-five out of every hundred cases of inflammatory affections of bone originate primarily in the medulla,—that the so-called cases of periostitis and osteitis are, in fact, cases of osteomyelitis. It has been observed in pathological specimens in all stages of inflammation and degeneration that the primary seat is almost invariably found in the medullary tissue; that the bone-tissue proper—bone-cells, if you please—simply occupy a passive position. This is easily understood, if we consider, by analogy, inflammation as it involves the soft tissues. You will remember that the connective tissue is usually the seat of primary changes in all forms of inflammation,—that it forms the basis of degeneration and of transformation of mature tissue into inflammatory, embryonal, or granulation tissue. The more essential structures usually are passive in the inflammatory process. The same holds true in cases of inflammation of bone. We can readily

conceive, if the periosteum be the primary seat in cases of periostitis, that by extension of the fibrous tissue along the vessels which enter the subjacent bone, forming a continuous reticulum between the connective tissue in bone and the periosteum, a certain degree of inflammation can extend from the periosteum into bone without primarily originating in the medullary tissue. It would be more proper to designate them as cases of interstitial inflammation of bone, for the same reason that we speak of interstitial inflammation of the parenchyma, kidney, liver, and lungs. The primary seat is in the connective tissue around the vessels, and the essential histological elements occupy a passive position, suffering secondarily by exudation from the nidus of connective tissue, strangulation, degeneration, and absorption. Consequently, in our classification of inflammatory diseases of bone, I will call your attention (*a*) to periostitis as a primary disease, premising that as such it is an exceedingly rare affection.

I will first discuss its etiology. In cases of severe contusion, of compound and subcutaneous fractures, affecting primarily and directly the periosteum, the injury being accompanied by a certain degree of reaction, always of a productive character, results in the exudation of formative material underneath the periosteum, the inflammatory process resulting in infiltration or a migration of the white corpuscles into the interstitial meshes of the periosteum. We have, then, a condition of subperiosteal exudation and infiltration; in fact, all changes of a histological character destined to form tissue of its own kind serve as a basis for the production and reparation of the broken ends of bone. Consequently, traumatic periostitis is invariably of a productive character, provided, however, that no infection has taken place. The process is one of reconstruction between the lost relations of the injured parts. For instance, if the periosteum have become separated over a considerable surface of bone, as we find it frequently in cases of fractured rib, one side of the periosteum being lacerated, the other by a displacement between the ends of the fractured bone becoming separated or detached, with certain spaces between it and the bone, the result is a direct adhesion between the denuded bone and the separated periosteum through the medium of the exudation issuing under the condima from the lacerated vessels. This form of periostitis you will recognize, clinically, by a slight degree of pain, a moderate amount of swelling, subsiding as the process of organization proceeds and as reconstruction takes place. This is the so-called traumatic periostitis, independent of infection. Its infective forms, on the other hand, more particularly that form which is the result of invasion of the specific microbes of suppuration at the seat of injury, contusion, or fracture, or the indirect localization of the microbes through the medium of the circulation, invariably results in a process of destruction (suppuration). From your lectures on "Suppuration" you will remember that we made a positive assertion, exclusive of the action of certain chemical poisons, that "no microbes, no suppuration." This assertion holds true in cases of periostitis. Periostitis not resulting in suppuration is usually a periostitis produced by some other cause. As a primary disease, suppurative periostitis in its acute form is almost unknown. Secondary periostitis occurs as a result of osteomyelitis, infection by the specific microbes taking place. The extent is marked by the surrounding primary bone-disease and area of bone-tissue involved, the periostitis corresponding with the extent of invasion. This form is characterized by a detachment of the periosteum from the subjacent bone, by the production of inflammation underneath the periosteum; consequently, in cases of this kind, on exposing the bone we will find a periosteum detached over the same area of bone that marks the extent of the primary bone-disease. We must not necessarily conclude from the fact of the periosteal detachment that the bone underneath is necrosed. The same reason which explains the integrity of bone will tend to show that its vitality need not be impaired, from the fact that the periosteal blood-supply has been sacrificed by the inflammatory process. The bone may still receive an adequate blood-supply from the remaining nutrient arteries entering the epiphyseal sinuses of long bones. Extension of the process takes place along the vessels, the microbic invasion being carried on through the medium of the vessels connecting the periosteum and the bone. Under favorable circumstances, an early affection of the products of inflammation, the bone not having become necrosed, the

cavity assuming a healthy granulating process, the detached periosteum may again become attached to the apparently-dead bone, and the process of reconstruction become complete. If the vessels within the bone itself are involved as the result of embolism by microbic invasion, or of thrombosis (if added to the suppurative periostitis), necrosis is an inevitable occurrence. You will recognize this form clinically from the rapidity with which the process extends. The entire shaft may become denuded within forty-eight or seventy-two hours. It can be recognized again by paying proper attention to the clinical history of the case, by tracing the disease to the primary cause (osteomyelitis). This form, clinically, is important to remember from the fact that the extent of separation may involve proximate joints. The periosteal separation continuing along the epiphyseal line may produce a separation of the ligaments attached to the epiphysis, and we may have a direct involvement of the joint in the same process.

Another distinct form (and one that we recognize as usually commencing primarily in the periosteal structure) is the so-called syphilitic periostitis, due to the action of a syphilitic virus directly upon the periosteum. This form usually assumes a productive character; it seldom results in suppuration; it is one of the various and multiple manifestations of tertiary syphilis. It is one of the clinical features of the disease, affecting most frequently the cranium or the anterior surface of the tibia; it assumes a circumscribed form, with well-marked margins, the exudation taking place underneath and between the periosteum and the bone,—the result usually of tissue-proliferation from the internal layer or condima of the periosteum producing a well-defined, circumscribed, hard swelling. Instead of the products of proliferation giving rise to the formation of pus, they form embryonal tissue out of the histological elements of the condima, and the process ultimately will terminate in the transformation of granulation-tissue (1) into cartilage and (2) into bone in the formation of so-called syphilitic exostosis. You have learned that in fractures of the skull union takes place by the minimum amount of provisional callus; consequently the product of tissue-proliferation in this locality is more likely to be a granulation-tissue, and this granulation-tissue, on account of its failure or absence of the osteogenetic influence from the subjacent bone, is destined to undergo degeneration, softening, removal by absorption, or suppuration.

Another and exceedingly important form is the so-called tubercular periostitis,—a periostitis due to the presence of a different form of microbes; consequently, the products of inflammation are varied. It is a well-recognized fact that this form may exist independently of preceding disease; and, although more frequently secondary, it does exist as a primary form. The deposit of exudation between the vessels and separation of the connective-tissue spaces produces a local anæmia at the site of the exudation; consequently the product does not go on transforming itself into tissue of a higher degree, but usually terminates in caseation, a conversion of the products of exudation into a cheesy material; this cheesy material acting as an irritant invades the tissues, the area of anæmia increases, and we have added to the tubercular degeneration an element of inflammation of bone around the cheesy product, and this product, acting as an irritant, terminating in the usual product of inflammation, suppuration. It is recognized clinically by the peculiar form of caries or destruction of bone underneath the periosteum. If you examine an abscess-cavity the result of tubercular periostitis, you will be impressed with the fact that the internal lining of the abscess-cavity consists of a deep layer of granulations, the granulations invading the adjacent tissues. If the abscess have been opened spontaneously, you will recognize the character of the disease by the undermining of the skin and the absence of all symptoms indicative of inflammation the result of microbic invasion; you will notice an ulcer thus formed by its circumscribed, well-marked margins, the granulation-tissue invading the skin and the subjacent tissues as well as the superficial portion of bone, the process of destruction advancing as infiltration takes place.

In making your differential diagnosis you will endeavor to elicit evidence of tuberculosis in other parts of the body by carefully inquiring into the clinical history of the case. Usually the epiphyseal extremities of long bones and the short bones, especially in close proximity to joints, favor the localization of tubercular processes.

Some forms of periostitis are diffuse from the very nature of the case, and from the invasion by the specific microbes of suppuration. On the other hand, both the syphilitic and tubercular virus usually result in a periostitis of a circumscribed character. The acute form of diffuse periostitis being a secondary affection, the primary is conspicuous for its prolixity.

We recognize three distinct and well-marked varieties of primary periostitis,—the osteoplastic, the suppurative, and the granuloid. The osteoplastic periostitis usually follows traumatism without infection. The suppurative or destructive form is due to the invasion of germs, which invariably act in this manner whatever tissues are involved; the tubercular variety terminating in caseation and inflammation, suppuration following as a secondary consequence. The so-called periostitis granulosa, or granuloma of Friedmann, is that form which is destined to remain stationary, which shows no tendency to transformation of the granulations into tissue of a higher type. This form, primary or secondary, as the case may be, either originating as the result of extension of the granular dépôt in bone, is noted clinically for its chronic character. Instead of an intense pain marking its onset, it comes slowly and insidiously; the tissues not being infiltrated rapidly by the products of inflammation, we have a process which, instead of making painful tension underneath the periosteum or within the bone, is accompanied *pari passu* with disintegration of pre-existing tissue, consequently the space occupied by the granulations is the result of removal of pre-existing tissues.

Periostitis granulosa is noted for its resistance to treatment and for the latency with which the symptoms appear; consequently its clinical feature is expressed by the word "progressive." This form is the direct result of invasion of tissues by the specific germs of tuberculosis. The abscess-cavity, as it were, still remains unaffected, although the germs may be present in small numbers, as has been observed by Koch and all the experimenters and discoverers who have made this subject a special study.

In considering the symptoms and diagnosis of (*b*) chronic periostitis, I call your attention first to that conspicuous and important symptom, pain. Periostitis as it affects the distal phalanx—the so-called paronychia (felon)—in the majority of cases is the result of infection due to traumatism; but on account of the unyielding structure of the periosteum, but more particularly on account of the rapidity with which the process of exudation takes place, we have that important pathological factor, tension. Pain is an important symptom, and relieved only by relieving tension. Tenderness is a more important element than pain itself. While pain may be present in some forms,—by this I mean a spontaneous or idiopathic pain,—you occasionally will find, by testing the effect of pressure, evidences of tenderness, as, for instance, in cases where the pain is deeply located,—where you are not able to recognize any amount of swelling,—where, from the absence of symptoms, you may have to rely upon this clinical evidence in arriving at a correct diagnosis. Again, we notice the frequency with which it occurs in the neighborhood of joints,—as around the hip-joint,—where circumscribed tenderness may indicate to you the existence of the disease. If it remains circumscribed, local, and does not change its situation, you may properly suspect the existence of periostitis, secondary or primary, as the case may be. The swelling is the result of tissue-proliferation, of infiltration in and underneath the periosteum or periosteal tissues. As long as the exudation remains limited to the space beneath the periosteum and bone, the swelling is usually slight; but if the external layer of the periosteum participates so that an exudation of the cells upon the bone occurs underneath the periosteum, the rapidity with which the swelling forms increases. You can readily imagine, from the firmness with which the periosteum is attached to bone, that if the product is of a plastic character the space is limited, consequently the swelling is slight. In chronic cases, therefore, with a tendency to the formation of productive material, the swelling is moderate and increases slowly, while, on the other hand, in acute cases the swelling is slight as long as the products of inflammation and infection are limited to the periosteum, but as soon as this district is in communication with the tissue around the periosteum we have a rapidly-increasing swelling, the result of extension from the periosteal tissues. If the periosteum be opened by incision, we have the means of direct inspection. In

cases of acute periostitis you may find a denuded bone presenting all the evidences of necrosis; in chronic periostitis we have either a honey-combed appearance of carious bone, or the floor of the abscess lined by a continuous uninterrupted layer of granulation. Inspection alone will give you a true picture or impression of the character or proper condition of the bone underneath. You must combine inspection with exploration. Where periostitis or superficial osteitis has resulted in partial death of bone, we have the so-called condition of *caries necrotica;* but if you wish to examine and ascertain the condition of the bone above as to whether there has been a loss of continuity of surface over the bone, you will resort to acupuncture. If you come in contact with firm, unyielding bone, you may satisfy yourselves that the bone is either intact or that separation of the periosteum has taken place without necrobiosis. If, however, on introducing the needle you find a rough surface here and there, and you can perforate the bone some distance (on account of the corroding effect of the granulations), you may rest assured that you are dealing with a case of caries. Impairment of function may be an important element, and you may have to rely upon this evidence almost exclusively if the disease be located so remotely as to preclude the possibility of all access of direct inspection or examination. The effect of the diseased bone upon the function of the part will not only satisfy you that you are dealing with an inflammatory condition either in the periosteum or in the bone, but it will also locate the disease, and to a certain degree indicate its extent. If, for instance, we have a periostitis affecting structures in close proximity to the hip-joint,—if after eliminating all the elements which we generally expect in cases of intra-articular disease as evidenced by direct examination (compression, extension, and so on), by testing mobility in the joint, we have evidences pointing towards a chronic inflammation of the hip-joint; therefore simple impairment of function limited to the area of motion, with loss of functional capacity of the joint, would indicate its existence.

Infiltration is the first point in considering the morbid anatomy. In examining post-mortem specimens, you will have in acute cases, before suppuration has taken place, infiltration of the white corpuscles into the connective-tissue spaces underneath the periosteum. If, on the other hand, you examine the disease still later, the result of a detrimental action of the specific microbes upon the products of exudation, you find evidences of suppuration, and the exudation is of a productive kind, you will find an increase in the thickness of the osteoplastic layer, a proliferation of the osteoplasts in the substance of the periosteum, and, as a direct result, embryonal tissue, embryonal exudation, embryonal transformation. If, on the other hand, the disease have been the result of infection with a tubercular virus, you will have all the evidences indicative of tuberculosis,—the abscess-cavity lined with granulations and miliary tubercles. A close microscopical examination will determine the primary cause. In cases of acute periostitis attended by suppuration, the vascularization will keep pace with the inflammatory process in proportion to the extent of the exudation, the vascular supply becoming diminished by compression, but as a result of the effect of the primary microbic cause of the periostitis upon the vessels themselves you will have a phlebothrombosis, a venous obstruction, which is an important pathological element in considering the effects of the circulation upon the products of exudation. In the tubercular variety the diminution of the vascularization of the products of inflammation constitutes a most important factor, the existence of local areas of anæmia determining the fate of the exudate material (caseation), the production of bone depending upon the primary cause, taking place from the condima or intima underneath the periosteum. This pathological condition can take place only in productive or osteoplastic periostitis. *No degeneration, no reproduction of bone.*

The primary formation of a callus is always evidenced first around the blood-vessels, just the same as the formation of a callus after fractures. The deposition of bone takes place as a secondary effect following rarefied osteitis. The death of bone following destructive periostitis may either involve a considerable surface of the bone or it may be death on a minute scale.

In considering the treatment of periostitis, I am happy to make an exception to my general rule in regard to the effects of drugs. It is a well-known fact that

syphilitic periostitis will yield very readily to the administration of mercury or iodide of potassium. In cases of this kind *never* resort to operative measures before having thoroughly tested antisyphilitic treatment. Evidences of tertiary syphilis will arise in many instances upon the administration of large doses of iodide of potassium, from the fact of its having a peculiar effect upon the fibrous tissue, aside from its antisyphilitic effects, and it is best adapted (1) to neutralize the effect of the syphilitic virus, and (2) to promote absorption. By large doses I mean from ten to twenty grains three or four times a day. It will diminish pain. It is a most satisfactory drug. If a case prove obstinate, and iodide of potassium fail, put your patient under the influence of mercury by inunction, and give small doses of corrosive sublimate, combined with twenty or thirty grains of iodide of potassium, until you produce its physiological effect or until the active symptoms subside. Equable compression, by giving support to the circulation, by condensing the connective-tissue spaces, favors absorption, and should always be resorted to.

If severe, excruciating pain be produced, you may divide the dense periosteum by subcutaneous section or incision.

All these operations upon bone must be done under the strictest antiseptic precautions. If you incise, determine the exact condition of the subjacent bone; and if you find that suppuration has taken place you should invariably follow incision by thorough disinfection of the abscess-cavity.

ORIGINAL COMMUNICATIONS.

INTRA-CRANIAL HEMORRHAGE.

A RECORD AND CLASSIFICATION OF ONE HUNDRED AND FORTY-THREE CONSECUTIVE FATAL CASES OBSERVED IN MEDICO-LEGAL PRACTICE AND IN PRIVATE AUTOPSIES IN THE CITY OF PHILADELPHIA.

Abstract of a Paper read before the Pathological Society of Philadelphia, March 25, 1886,

BY H. F. FORMAD, M.D.

I WISH to make a few remarks upon the different forms of intra-cranial hemorrhage which I have observed, and will present a number of specimens in illustration. There exist no well-defined descriptions of the various forms of intra-cranial hemorrhage with reference to their etiology, and no classification that could be of any service in medico-legal examinations, and I would submit the classification and observations presented below as particularly acceptable for the latter purpose. These records may also be of some use to the surgeon who wishes to trephine. The observations are sufficiently numerous to warrant conclusions of importance for various ends. I regret that I met my cases on the autopsy-table only, and hence am unable to offer clinical details. In some cases the history was far from being reliable, and in a few the history was left to conjecture from the surroundings, the circumstances of the case, and the appearances and general lesions of the body.

I also wish to give credit to my colleague in coroner's work, Dr. R. R. Stewart, for his valuable assistance in these observations, as well as to his assistants, Drs. A. J. Plumer and George H. Chambers.

The following cases of intra-cranial hemorrhage embrace the results of various kinds of head-injuries (traumatic), and cerebral apoplexies (idiopathic hemorrhages) as well. By the term cerebral apoplexy I mean exclusively hemorrhages in the brain, and do not refer to "congestive," "serous," "embolic," or "nervous" apoplexies, and other affections which tyrannic nomenclature has thrown together under the name of apoplexy.

Idiopathic cerebral apoplexy should also be strictly separated from a traumatic cerebral hemorrhage. This is not done by many writers. The latter can be further subdivided into very well defined sub-varieties of hemorrhages, each etiologically distinct, as will be shown below. These observations will clearly show the necessity and usefulness of a classification such as suggested. There should never be any reasonable doubt at the post-mortem table as to whether a cerebral hemorrhage is due to disease or to injury, or to both combined; nor as to whether a head-injury has preceded or followed an intra-cranial hemorrhage. The diagnosis between the conditions just stated is much more difficult during life. I have seen errors made by the foremost surgeons and physicians, and in the best hospitals in this city. Cases of apoplexy have been diagnosticated as cases of fracture and trephined, and I have also seen cases of fracture of skull unrecognized and untouched, —left to die in the medical wards.

Upon the post-mortem table, however, there should be no difficulty in recognizing

such lesions at the present status of morbid anatomy as a distinct and well-defined science. After sufficient accurate observations have been made, and after seeing conditions repeat themselves, case after case alike, and having in the majority of instances cause and effect directly before the eyes, one should be enabled in disputed cases to make a post-mortem diagnosis which leaves but little room for doubt.

The cases of intra-cranial hemorrhage which I have observed may be divided into the following eight different classes (the accounts being given here in abstracted form):

CLASS I. (Twelve cases).—*Post-mortem Appearance:* One or more small hemorrhages in the fasciculi teres in fourth ventricle; also ecchymoses in the lining of the other ventricles; no massive hemorrhage anywhere; cerebral substance as well as membranes intensely congested; cranium much congested; drops of blood oozing from cut surface and from periosteum all over; marks of contusion in scalp, with more or less ecchymosis, noted in all cases.

Histories: In two cases death was caused by electricity (details will be recorded elsewhere). Ten cases revealed histories of concussion of brain from injuries to head, without fracture of skull. Death was rapid or sudden from shock in all these cases. Six were males and six females. The majority were young persons.

CLASS II. (Twenty-three cases).—*Post-mortem Appearance:* Massive hemorrhage (blood-clot) of various sizes found between pia and dura mater; location, in the majority of cases, about opposite to place of application of violence; in none of these cases was this meningeal blood-clot located immediately beneath the point of application of violence; ventricular ecchymoses also found usually; brain anæmic in the majority of cases wherever hemorrhage large; scalp-injury well marked in some, in others less so, while in a few cases it was hardly noticeable.

Histories: Concussion from injuries to head without fracture in twenty-one cases; with fracture of skull in two cases. Death rapid (all within one hour) or sudden, either from shock or from compression of brain, the result of pressure from clot, or from both. Fourteen males, nine females. Ages varied.

CLASS III. (Forty-five cases). — *Post-mortem Appearance:* Massive hemorrhage (blood-clot) usually quite large, located between dura mater and inner surface of fractured skull, and at the site of application of violence only; brain anæmic.

Histories in all these cases revealed injuries to skull, from accidents, blows, or other violence, resulting in fracture of skull. Death, on the average, ensued slowly, from compression or anæmia of brain, in the lapse of from several hours to several days; in a few cases from five to eight days. Thirty-eight males and seven females. Majority young and middle-aged persons.

CLASS IV. (Twelve cases).—*Post-mortem Appearance:* Massive hemorrhage the same as in the preceding class, but occurring both at site of application of violence and also on some point on the opposite side of skull; the first being a large clot between dura mater and skull, the latter a small one in the arachnoid, between dura and pia mater. At the site of injury there was found a fracture of the skull in all these cases, so that they presented the combined features of Classes II. and III.

Histories, in these twelve cases, showed injury to skull, resulting in both fracture and concussion. Death was nearly instantaneous in all these cases. Nine were males, and three were females. Mostly young and middle-aged persons.

CLASS V. (Nine cases).—*Post-mortem Appearance:* Punctiform and multiple hemorrhages into the tissues of the dura mater, which showed much thickening and adhesions to inner surface of skull from chronic hemorrhagic pachymeningitis; great œdema of the pia mater; brain congested.

Histories in these cases revealed former attacks of sunstroke or old injury of head. Death usually sudden, and usually following a fall or severe intoxication and excitement. Ages of deceased between 20 and 50. All males.

CLASS VI. (Thirty-four cases).—*Post-mortem Appearance:* Massive hemorrhage of various sizes into the brain-substance proper, and thence into one or both of the lateral ventricles; hemorrhagic softening of brain-substance of corpora striata or their vicinity; no meningeal hemorrhage in any of these cases, though in some instances blood was observed to have leaked out from the inner ventricles through the transverse fissure and the

fourth ventricle, and some usually liquid (post-mortem) blood would be seen upon the periphery of the brain, in the fissures, and in the meshes of the pia mater; brain-substance in nearly all cases quite anæmic; atheroma of cerebral vessels in all but three cases; multiple small aneurisms of cerebral vessels noted in several cases; chronic pachymeningitis in various degrees in all but five cases; in some cases there were scalp-injuries from secondary falls,—*i.e.*, falls that were the result of a preceding cerebral hemorrhage.

Histories, whenever obtainable, revealed either alcoholism, rheumatism, or syphilis. Middle or advanced age. Twenty-six males, eight females. Death in the majority of cases ensued slowly. These are true cases of idiopathic cerebral apoplexy. Many of these cases came under coroner's jurisdiction on account of suspicion of violence.

Class VII. (Six cases).—*Post-mortem Appearance:* Massive hemorrhage of various size, below pia mater, into brain-substance, without breaking into lateral ventricles. In one case the blood-clot involved the substance of the pons and protruded into fourth ventricle; in two cases it occupied the substance of the right parietal lobe, which was the seat of an abscess; in three cases the hemorrhage was multiple in smaller foci, with localized hemorrhagic softening of periphery of brain-substance in various places; in three cases there was atheroma, and in the other three fatty erosions of the cerebral vessels; chronic pachymeningitis in all cases; brain-substance congested.

Histories were those of former head-injuries, alcoholism, and probable syphilis. Death rapid, following intoxication or exertions. Age advanced in all cases. Five were men. Foul play had been suspected in all these cases.

Class VIII. (Two cases).—*Post-mortem Appearance:* Massive meningeal hemorrhage below pia mater combined with hemorrhage into ventricles; no visible hemorrhage into brain-substance; atheroma and multiple small aneurisms of vessels of pia and of choroid plexus; ecchymosis in scalp.

Histories of accidental falls. No previous symptoms of cerebral disease had been noted. Intemperate habits, injury of head leading to rupture of the diseased vessels, had evidently preceded the cerebral hemorrhage. The persons were at work (washing) at the time when, nearly simultaneously with the concussion from the fall, death ensued. Both were women. Ages, 57 and 63 years.

Remarks and Comments.—A number of cases of intra-cranial hemorrhage which were encountered have been omitted from the series above detailed; as well as several cases of compound comminuted fracture, in which the skull, membranes, and brain were partly pulpified into a mass, and hence the hemorrhage was not satisfactorily made out. I have also excluded chronic cases of cerebral hemorrhage and those resulting in abscesses or in a fatal lepto-meningitis or cerebritis after the patients had partly recovered from the immediate effects of the hemorrhage. Nor have I incorporated into those records another large class of intra-cranial hemorrhage,—viz., that of infantile meningeal hemorrhage. Of these I have seen many in coroner's work. Meningeal hemorrhage is common in infanticides and fœticides, and even in still-born children. I can offer no plausible explanation of the frequency of meningeal hemorrhage observed in the still-born, otherwise than that they were presumably due to traumatic injuries from violence or to compression of the cranium during protracted labor or when forceps had been injudiciously applied. I have not met with cerebral hemorrhage in children other than meningeal.

Returning to my classification, I would state that the quantity of the hemorrhage or the size of the clot in any case of intra-cranial hemorrhage appeared, in all the cases observed, to depend upon the duration or the time that elapsed from the moment of injury to death. In cases where death ensued rapidly or instantaneously from shock, as happened in many fatal cases of concussion, or even in fractures of skull followed by immediate death (as by falls from a great height), the bulk of the ante-mortem hemorrhage (the blood-clot) was remarkably small; or clots were occasionally entirely absent, and only a post-mortem oozing of liquid blood could be observed. Where death had been protracted for several hours, the blood-clot was usually large, weighing up to six or eight ounces, and causing death by compression of brain. In some cases of fracture of skull the hemorrhage is probably delayed for several hours or ensues but very gradually. Some patients are said to have

walked around for many hours after the injury, and subsequently, when the blood oozed out in sufficient quantity to compress the brain, they fell, became unconscious, and died in coma. In one case of this nature I found a meningeal clot weighing eight ounces.

In the cases in which the intra-cranial hemorrhage was voluminous and death instantaneous, there was very little scalp-ecchymosis; whereas scalp-hemorrhage was more pronounced where the intra-cranial hemorrhage was small and death delayed.

Further, in no case where there was internal cerebral hemorrhage was there any meningeal hemorrhage when the cerebral vessels were normal; and in no case of traumatic meningeal hemorrhage did I see any coincident ventricular hemorrhage (except small ecchymoses) unless there existed some old lesion of the vessels or substance of the brain. It appears, however, that blood from the lateral ventricles may leak through the foramen of Monroe into the third ventricle, and thence by the aqueduct of Sylvius find its way into the fourth ventricle; but in none of the cases did I observe that a primary hemorrhage into the fourth ventricle ever extended to the lateral ventricles, probably on account of its rapidly fatal character.

A hemorrhage on the outside of an uninjured pia mater cannot reach the interior of the brain or the lateral ventricles.

The source of the hemorrhage is often very difficult to determine. In fracture of the skull the hemorrhage is often diploic; in concussion of the brain the hemorrhage has for its source the vessels of the pia mater; in diseased conditions of the brain or in atheroma of vessels the small feeding branches of the middle cerebral and of the basilar artery bleed most frequently, and the blood, breaking into the lateral ventricles, forms clots in either one or both of the ventricles.

The view expressed by Dr. J. A. Lidell in his large treatise on apoplexy (New York, 1875, p. 113) that "meningeal hemorrhage not unfrequently occurs spontaneously, as well as in consequence of the operation of violent causes," and that (see page 120) "meningeal hemorrhage of spontaneous origin is not a rare affection," is unquestionably erroneous. Yet such "views" are quoted by writers on forensic medicine and presented to juries in murder-trials as *facts*. Ignorant or ill-informed post-mortem examiners can set murderers free, or, on the other hand, they can create unnecessary court-trials.

Conclusions.—I. Hemorrhages exclusively above the pia mater and above the dura mater—*i.e.*, on the outside of the brain—are always due to traumatism or to sunstroke, provided a cerebral source for hemorrhage is excluded, and the cerebral vessels and membranes were not diseased.

II. Hemorrhage in the floor of the fourth ventricle is always traumatic, provided there are no accompanying blood-clots in the lateral ventricles or any other part of the cerebral substance. If, however, the brain-substance is very *anæmic* (in the absence of a massive hemorrhage), then a ventricular ecchymosis may indicate that death ensued from epileptiform convulsions (idiopathic).

III. Hemorrhage exclusively below the pia mater or in any part of the brain-substance or into the ventricles (except the fourth) is always idiopathic,—*i.e.*, is due to disease.

IV. There must be a diseased condition of the cerebral vessels or substance in order to exclude violent causes and to ascribe a hemorrhage to disease. There must be traumatism (a fall or violence) in order to account for a hemorrhage in a normal brain.

V. The blood-clot in concussion of the brain is not found at the point of application of violence, but always somewhere about the opposite side of the brain, and always within the cavity of the arachnoid, —*i.e.*, between the pia and dura mater.

VI. The blood-clot in fracture of the skull is always found at the point of application of violence, immediately below and always between the dura mater and the fractured part of the skull itself. In rapidly fatal cases there may be a second, an intra-dural, clot in some other part of the brain, due to the effects of concussion.

VII. A blood-clot formed within the cranial vault is more favorable to the patient if due to fractured skull than if due to a mere concussion.

VIII. Only clotted blood and infiltration of blood-corpuscles into tissues indicate an ante-mortem hemorrhage; liquid blood is due to post-mortem oozing, and only stains, but does not infiltrate, tissues. In cases, however, where rapid asphyxiation or certain poisons co-operate with the traumatic injury in causing speedy death,

the blood may remain liquid and clots may fail to form.

IX. Severe bruises and cuts of the scalp may be seen in cases of idiopathic apoplexy where a sudden cerebral hemorrhage causes a person to fall.

X. In some cases it is impossible to decide by medical examination alone as to whether a head-injury and the resulting hemorrhage is due to a fall or to violence.

XI. External marks of violence may be invisible to the unaided eye in some cases of injury of the head or other parts, but are easily detected and also distinguished from post-mortem spots by means of the microscope.

XII. The bulk of an intra-cranial hemorrhage stands usually in inverse proportion to that of the external scalp-hemorrhage; but it stands in direct proportion to the duration or the time that has elapsed from the moment of injury to death.

REVIEW OF RECENT WORK IN MEDICAL CHEMISTRY.

BY WILLIAM H. GREENE, M.D.

ALBUMEN IN THE URINE.

P. FÜRBINGER recommends for the detection of albumen the use of gelatin capsules containing a mixture of the double chloride of mercury and sodium, sodium chloride, and citric acid. This mixture is only slightly hygroscopic, and precipitates albumen in flakes if any appreciable quantity be present, and produces a cloud if the proportion of albumen be so small that it cannot be detected by other reagents. In delicacy this test is almost equal to the double iodide of mercury and potassium, over which it possesses the advantage of not precipitating alkaloids. Since uric acid might be thrown down by the citric acid present, a concentrated urine should be diluted with half its volume of water before applying the test.

H. Millard uses for the detection of albumen a mixture of two parts of ninety-five-per-cent. carbolic acid with seven parts of pure acetic acid and twenty-two of potassium hydrate solution.

For the same purpose N. Kowalensky recommends a solution of uranyl acetate, which he claims will produce distinct flakes in a liquid containing as small a quantity as 0.019 per cent. of albumen. The precipitate is slightly soluble in water, but is rendered insoluble by an excess of the uranyl salt. It may be washed with alcohol, but dissolves readily in dilute acetic acid (two per cent.), and is re-precipitated when the free acid is neutralized. It is also soluble in dilute nitric acid, but the solution becomes clouded when concentrated nitric acid is added. Since the phosphates in normal urine will always occasion a precipitate, it is necessary for the detection of albumen that the precipitate shall be dissolved in dilute nitric acid and that strong nitric acid be added to the solution so obtained.

ARTIFICIAL ALBUMINURIA.

According to Julius Schreiber, albuminuria may be easily and safely brought about in healthy individuals by the application of two pads arranged as a screw-compress, and placed one in front, the other at the back of the thorax. The movements of the chest and the pulmonary circulation are thus impeded, and the experiment succeeds best with young subjects, of between ten and twenty years; from one to fifteen minutes' compression is generally sufficient. The urine of the healthy subjects, especially of the younger ones, was found to be slightly albuminous at certain hours of the day, even before the compression; boiling with acetic acid or addition of metaphosphoric acid produced a decided cloud; individuals in whose urine flakes were formed under these circumstances were excluded from the experiments. After the compression a notable proportion of albumen was found in the urine of twenty out of twenty-six cases, and in eight of twenty-four cases in which quantitative experiments were made the proportion of albumen varied from six to eighteen parts per one thousand. The albuminuria continued for about an hour after the compression. As Senator had previously found in physiological albuminuria, the seralbumen appeared to be accompanied by globulin in these cases. The volume of urine excreted was only slightly diminished. In two cases it was found that compression of the thorax diminished the elimination of urea, besides inducing albuminuria: the first excreted twenty-three grammes of urea a day before the compression, after it only 17.784 grammes per day, with 2.28 grammes of albumen; the second, whose daily elimination was twenty-six and twenty-four grammes the

two days before compression, excreted only 15.9 grammes after it, together with 1.14 grammes albumen.

INCREASED ELIMINATION OF SUGAR BY THE URINE AFTER INGESTION OF CARBOHYDRATES IN DIABETES MELLITUS.

Worm Müller has studied the influence of ingested carbohydrates on the excretion of sugar in health and in mild diabetes mellitus, marked differences resulting from the two conditions. The patients, to whom the carbohydrates were administered in the morning and after fasting, had been kept on rigid antidiabetic diet until the urine was free from sugar. As in the case of healthy subjects, ingested glucose passed into the urine in limited quantity; the transitory glycosuria so established was not greater than that appearing in health under similar circumstances, and disappeared in the course of a few hours. In the experiments with honey, in which as much as eighty-four grammes of levulose and glucose together were administered, a relatively large proportion of the latter passed into the urine, but never the former, the results being the same as in health, and corresponding with those previously published by E. Külz. Contrary, however, to the phenomena of health, the ingestion of starchy food was followed by the appearance of glucose in the urine. This glycosuria may begin in half an hour and terminate in an hour and a half. Saccharose and milk-sugar do not appear as such in the urine, glucose only being eliminated after their administration. From these results it would seem that diabetics differ from healthy subjects not only in the capacity to retain carbohydrates, converting them into glycogen in the liver, but by an excessive and abnormal tendency to bring about a fermentation whose location is yet to be established. No invertin appears to pass into the urine, for at a temperature of 38° (C.) diabetic urine fails entirely to invert saccharose in twenty-four hours.

CYSTINURIA.

Stadthagen has examined the urine of a thirteen-and-a-half-year old boy, of healthy family, who from time to time during four years passed by the urethra small cystic calculi. The patient, whose saliva responded feebly to the test for sulphocyanate, passed urine from which hexagonal crystals of cystine were deposited. The total sulphuric acid, including sulphuric ethers, was determined, and the not fully oxidized sulphur was estimated as easily-oxidized sulphur, or that capable of oxidation by potassium chlorate and sulphuric acid, and difficultly-oxidized sulphur which required fusion with nitric acid and soda for its oxidation. The sulphur of the sulphocyanates is readily oxidized: from thirty to forty per cent. of that contained in cystine is readily oxidized; the remainder is oxidized with difficulty, and so is nearly all of that contained in taurine.

Careful analyses, made on four days widely separated, showed a daily excretion of from two hundred and ninety-seven to three hundred and thirty-eight milligrammes of sulphur as sulphuric acid, and from eighty-nine to one hundred and twenty milligrammes of other sulphur, from fifty-one to sixty-nine milligrammes of the latter being difficultly oxidizable. The percentage of sulphur not as sulphuric acid to the total sulphur varied from eighteen to twenty-five. Healthy subjects of different age excrete from five hundred and sixty-nine to eight hundred and sixty-two milligrammes of sulphur as sulphuric acid, and from eighty-seven to one hundred and seventy-one milligrammes of other sulphur, from sixty-seven to one hundred and thirty-nine of the latter being difficultly oxidizable. The percentage of sulphur not as sulphuric acid to the total sulphur is from thirteen to seventeen. The quantity of sulphuric acid eliminated by the case of cystinuria was always below the normal, and Von Stadthagen concludes that under normal circumstances the sulphur of cystine is oxidized to sulphuric acid in the tissues.

INFLUENCE OF GLYCERIN, SUGAR, AND FAT ON THE EXCRETION OF URIC ACID.

J. Horbaczewski, who recently made the synthesis of uric acid by heating glycin and urea, has studied together with F. Kanera the influence of glycerin, sugar, and fat on the elimination of that acid. Glycerin taken with the food increases this elimination: the largest daily excretion was seven hundred and one milligrammes before beginning the experiment, and increased to eleven hundred and forty-nine milligrammes after taking two hundred grammes of glycerin. Saccharose, probably also other carbohydrates, exerts no direct action on the formation of uric acid, but by its "albumen-economizing" influence diminishes the excreted acid only as long

as the ingestion of sugar is continued. When it is stopped, the quantity of uric acid does not become normal until the whole amount that has not been excreted while taking the sugar is eliminated. Neutral fats act in a similar manner so far as the diminution of excretion is concerned, but the elimination becomes at once normal when the fatty diet ceases.

THE ACTION OF POISONS ON INTESTINAL WORMS.

W. von Schroeder has made some experiments on the ascaris mystax of the cat, and the ascaris lumbricoïdes of the pig, the latter of which is probably identical with the similar parasite of man. After removal from the dead animals the worms were preserved in a one-per-cent. solution of common salt, as recommended by Bunge, who found that they would so live from seven to ten days. To such a liquid the poisonous substance was then added: 0.8 per cent. sulphuric acid caused death in one and three-quarters to two hours; one per cent. sodium hydroxide in five to seven minutes, 0.2 per cent. in twenty minutes; 5.8 per cent. sodium carbonate in five to six hours; five per cent. potassium carbonate in three and a half to eighteen hours. The resistance to the action of energetic poisons was notable: the parasites lived more than three hours in a 0.5 per cent. strychnine nitrate solution, more than twenty hours in two per cent. conine bromide, four hours in two per cent. morphine chloride, and the same time in 0.5 per cent. veratrine. However, one hour in 0.1 per cent. corrosive sublimate, sixteen to twenty-six minutes in 0.1 per cent. nicotine, seventy-six minutes in 0.01 per cent. nicotine, and sixty to ninety-nine minutes in 0.005 per cent. of the same substance, were the extreme limits of life. Curiously enough, saturated aqueous solutions of santonine stimulated the movements of the worms and produced no other effect in forty hours; olive oil and castor oil saturated with santonine were inactive for forty-three and fifty-two hours respectively. The author therefore concludes, as Falck had previously done, that santonine may further the expulsion of ascarides, but that it does not kill them as is generally believed. The worms appear to hermetically close their bodies while in poisonous liquids: after eighteen hours' immersion in one per cent. potassium ferrocyanide only traces of that salt can be detected in them, but they immediately absorb the solution if it contains at the same time peptone and cane-sugar, while they refuse it altogether if it contains strychnine.

A NEW METHOD FOR MILK-ANALYSIS.

M. A. Adams has suggested a new method for the determination of fat and total other solids in milk. Five cubic centimetres of milk are weighed in a tared beaker of about thirty cubic centimetres' capacity: the milk is then sucked up by a tared coil of dry blotting-paper, made by rolling up a strip of "white demy blotting" two and a half inches wide and twenty-two inches long. When all of the milk is absorbed the coil is removed and the beaker again weighed: the paper coil is placed dry end downward on a glass plate, and dried for an hour in a hot-water oven; it is then transferred to an extraction apparatus and exhausted with ether or light petroleum. The fat is dried and weighed, and the solids not fat are estimated by thoroughly drying the exhausted paper coil at 100° and again weighing.

Although it is claimed that the complete and rapid separation of the fat permits this method to give accurate results, it is not probable that the non-fatty substances can be estimated by it with any accuracy; the drying of a paper coil of the size described is too uncertain to permit of trustworthy results.

MICRO-ORGANISMS IN POTABLE WATER.

T. Leoni publishes an account of the results of the gelatin-cultivation method applied to the water of Monaco. As supplied to the city from Mangfall spring, this water contains five micro-organisms to the cubic centimetre. After standing in sterilized vessels for twenty-four hours it contains more than a hundred; in four days the number increases to three hundred and fifteen thousand, and in a month to more than a million; it then diminishes gradually until the end of six months, when only ninety-five remain. In water containing carbon dioxide, whether artificial or natural, the increase of organisms does not take place, and experiments have shown that this result is brought about directly by the carbon dioxide.

P. F. Frankland has made experiments upon the efficacy of various filtering media

for the removal of micro-organisms from water. Some of the water contained fermented urine; some of it was natural potable water.

Green-sand, coke, animal charcoal, and spongy iron were the only substances that wholly removed the micro-organisms, but a month's use destroyed in great measure—and entirely in the case of animal charcoal—this power of removing the organisms.

ON THE RELATIVE VALUE OF CHEMICAL AND BACTERIOLOGICAL EXAMINATION OF POTABLE WATER.

After repeated chemical and bacteriological examinations of potable water, Link has arrived at the conclusion that there is no general relation between the degree of bacterial infection of a water and its chemical characters. He also claims that a bacteriological investigation, based on the too doubtful results of a limited number of determinations of the number of colonies that may be developed, often leads to a conclusion diametrically opposed to that based on chemical analysis, and that a sufficient basis is still wanting for an attempt to make the results of bacteriologic experiment of general value as a criterion for the judgment of a potable water. As hitherto, chemical analysis must lead to a decision.

TYROTOXICON.

Public attention has recently been so repeatedly called to poisoning by milk-products that the method pursued by V. C. Vaughan in the extraction of tyrotoxicon from cheese may not be without interest. The cheese was extracted with water, and the acid aqueous solution was neutralized with sodium hydroxide and then exhausted with ether. The separated ethereal extract was evaporated in the cold, the residue again treated with water, and this solution exhausted with ether. The last ethereal solution is evaporated over sulphuric acid in vacuo, and needle-like crystals of the new substance separate. The crystals have a sharp, burning taste, soon followed by dryness of the throat, oppression, and nausea. In addition to these symptoms, a drop of the liquid from which the crystals had separated produced diarrhœa. The same effects were produced on several individuals. Chemically, the substance does not respond to the tests for the alkaloids; it reduces iodic acid and forms Prussian blue with ferric chloride and potassium ferricyanide.

In order to obtain good crystals the last extraction must be made with pure ether. Tyrotoxicon has a penetrating odor like that of old cheese; it is soluble in water, alcohol, and ether. Sixteen kilogrammes of one poisonous cheese yielded 0.5 gramme of the substance, while from the same quantity of another cheese 0.1 gramme was obtained.

MYALGIA.

Read before the Baltimore Medical Association

BY A. B. ARNOLD, M.D.,

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DURING the months of March and April of this year an unusual number of cases of so-called "muscular rheumatism" came under my notice, which attracted my attention to the subject. This disorder appears to have elicited but little interest among observers, as the literature on the subject is extremely meagre. Probably this apparent neglect is owing to the circumstance that a more accurate discrimination of affections that were formerly classed as "rheumatic" has greatly restricted the use of this term. It is well known that numerous instances of muscular pain are merely the concomitants of various diseases of a definite character. There nevertheless remains a group of myopathic disorders which are mainly distinguished by a painful sensation which patients locate in certain muscles or their fasciæ. The term myalgia is undoubtedly preferable to denote this peculiar muscular pain, as it does not imply a theory; but if the word rheumatic is merely understood to signify the effect of atmospheric influences, which by common consent favors the development of the affection under consideration, there can be little objection to speak of muscular rheumatism.

The essential symptom of myalgia, as already intimated, is the sudden accession of a diffused pain, chiefly referred to some muscle or a group of muscles. When the pain or tenderness is limited in extent and of a more acute character, it is probable that the aponeurosis or tendon of the muscle is mainly affected. Occasionally the pain is of a dull, aching kind; more frequently it is of a tearing, dragging nature. It is started

and aggravated on movement; but even during perfect rest there remains a feeling of soreness and tiredness resembling the peculiar sensation of an over-fatigued limb. Deep pressure also causes pain. The patient seeks to assume a certain position of the body which he finds to give him some relief. No outward change of the painful muscle is visible, fever is rarely present, and no sequelæ occur.

In reference to the etiology of muscular rheumatism, it must be admitted that an attack can be frequently traced to the immediate effect of exposure, or what is commonly understood by the expression of "catching cold." I am inclined to believe that patients give a true explanation of the causation of the muscular pain when they attribute it to the direct influence of a draught of cold and moist air during the overheated state of the body resulting from muscular exertion. A traumatic cause, as a strain, in stooping or lifting a heavy substance, rather than exposure, is the etiological factor in some cases, and even the rupture of muscular fibres may sometimes be suspected.

Among the varieties of myalgia none is more painful and distressing than the implication of the occipito-frontalis muscle. The whole scalp may be so exceedingly tender that the patient dreads the use of the comb or brush. The peculiarity of this form of headache consists of a steady, intolerable pain, which is not confined to a particular region of the head. Frequently the pain extends to the temporal muscles or radiates to the nape of the neck and the shoulders. Patients often complain that they do not know where to lay the head when trying to go to sleep. It is well to remember that a similar pain of the head attended by insomnia occurs in syphilitic periostitis of the cranium. The violent pain of the head dependent on cerebral tumor or abscess will not be easily mistaken for rheumatic headache, in view of the fact that the pain resulting from intracranial disease is far more intense and persistent, and is generally limited to a particular spot.

Much relief will be obtained in the mild form of rheumatic headache from rest and covering the head and neck with a thick woollen shawl. A full dose of Dover's powder, taken in the evening with hot lemonade, usually secures a quiet night. Great violence of the pain may require the prompt action of a hypodermic of morphia. When the headache does not yield to these measures or has a tendency to become chronic, good results may be expected from blistering the nape of the neck or the parts behind each ear.

In ordinary wry-neck, it is mainly the sterno-cleido-mastoides which is affected. The face is turned to the sound side. The affected muscle in this variety of torticollis is often found in a spasmodic condition, and feels hard to the touch. A similar appearance of the neck is sometimes witnessed in disease of the upper vertebræ due to reflex action. The large majority of cases of rheumatic torticollis readily yield to stimulant liniments. In long-standing cases the deformity is kept up by the persistent spasmodic condition of the muscle. Blistering is occasionally of service, but the application of the galvanic current is more frequently successful.

The term pleurodynia is commonly applied to the rheumatic myalgia affecting the pectoralis major and intercostal muscles from the fifth to the eighth ribs. Much pain and embarrassment in breathing is experienced during forced inspiration. The pain resembles the pleuritic stitch, and for this reason patients allege that they cannot take a full breath. Nervous persons are greatly alarmed when the left side of the chest is the seat of the pain, being apprehensive of an attack of pleurisy or heart-disease. The result of the physical examination of the thoracic viscera will of course remove the doubt.

Pleurodynia is, however, more apt to be mistaken for intercostal neuralgia. The distinction rests upon the circumstance that in the latter affection the pain is limited to the course of the nerve; it is of a paroxysmal and lancinating character, and marked by the existence of punctæ dolorosæ. Sometimes the scapular muscles and those of the back are implicated at the same time.

The pain of pleurodynia is frequently relieved by a large mustard-poultice. I have seen benefit from a liniment composed of the camphorated tincture of soap and veratria, in the proportion of eight grains of the latter to the ounce of the tincture. A hypodermic of morphine can hardly be dispensed with when the pain is severe and greatly interferes with the breathing. The application of wet cups often answers the same purpose.

It is in lumbago that a traumatism rather than the rheumatic element most frequently gives rise to the backache which induces the patient to keep his body in a bent position. The lumbar pain commonly comes on during active exertion involving a strain or stretching of the muscles. Either one side or both sides may be affected. The character of the pain bears a close resemblance to the sacral pain of smallpox. The pain is far less intense in the backache from renal and uterine affections and hemorrhoids. In many cases of lumbago of a recent and mild nature I have observed prompt relief from the popular remedy of passing a hot flat-iron over the protected part. In fact, the application of dry heat is always grateful. A more elegant way of relieving the pain is the stimulation of the electric brush. It frequently acts like a charm. Chronic cases yield sometimes to the persistent use of the galvanic current, which I learned from actual observation. For the purpose of subduing the pain in lumbago at once, nothing can take the place of an injection of morphine.

Is is difficult to determine to which category of painful sensations the so-called "growing pains" of children and the "schoolmate's pain" should be referred. Suppose it be admitted that these vague morbid feelings in the majority of instances depend on some recognizable cause, there are, nevertheless, cases met with in which the subjective symptom of muscular pain appears to constitute the sole ailment. Perhaps this variety of pain belongs to the category of "trunk pain" to which Dr. Inman has drawn attention. I have observed in children such actual suffering from pains in the back, chest, and the abdominal walls that I was unwilling to believe them to be a sham. I rather was inclined to ascribe them to the deleterious influence of the unnatural sedentary life and constrained position of the body to which children are condemned while attending school. A release for a reasonable time from school should certainly be advised. I have seen much benefit in these cases from general faradization according to the method of Drs. Beard and Rockwell.

I am not sure whether the general pain, or, more properly, the sensation of uneasiness felt in the limbs and back, which often succeeds a chill, but does not develop any serious symptoms, should be classed with muscular rheumatism. It is now the fashion to refer this condition to a malarial influence. I have never failed to overcome this ephemeral disorder by diaphoretics assisted by a dose of Dover's powder.

A word in regard to the pathology of myalgia. Among the morbid changes that may possibly underlie this affection, the existence of muscular inflammation suggests itself. But, with the exception of the pain and tenderness, there are no symptoms which would indicate the occurrence of myositis. As the pain can only be due to the implication of sensitive nerves, an irritative condition of nerve-fibres distributed to the muscular structure may be supposed to exist. Concerning the character of the pathological alteration which causes the morbid sensibility of the intra-muscular nerves in myalgia, it is as difficult to determine as that which obtains in neuralgic pain.

TRANSLATIONS.

Mummification of a Corpse by Micro-Organisms.—At a recent meeting of the Académie de Médecine, M. Brouardel made known some curious and interesting facts concerning the dead body of a girl 22 years old, which was discovered in a cellar under a heap of straw. The body had been there about a year, and was in a perfect state of mummification; putrefaction had not set in. One of the limbs was shown at the meeting: it was thoroughly dissected; the tissues were hardened, and when struck sonorous. M. Audouard had attributed this mummification to the dryness of the soil on which the dead body had been placed, but M. Mégnin found it to be due to five different species of acari, which deposited the débris of the envelopes of their eggs and carapaces in the dust that was found among the dried tissues of the body. Bergeret, in 1855, had proved that by studying the generations of acari which have been at work on a dead body the date of death can be estimated. From the examination of the débris of acari in a child's corpse, he ascertained that death had occurred two years previously. A judicial inquiry confirmed the statement.

M. Brouardel described the order of succession of the different species of acari, when a dead body is exposed to the air, also the work of destruction accomplished by each separate species. It is first invaded by the *asticots* (larvæ of flies), and then by the *dermites*,—one species absorbing the fluids, another consuming the fatty acids. Finally come the *anthrenæ* and the *acari* (tyroglyphus), which consume the soft parts. When a species has finished its work it dies on the dead body, or is devoured by a succeeding species, which in its turn sets to work. Each generation in summer-time lives from six weeks to two months. By taking cognizance of this fact in the recent Villemomble murder, M. Mégnin established with precision the exact date of the burial of the human remains discovered in the garden. In the neighborhood of the body a particular kind of ant was observed which is never found in soil recently disturbed; also the débris of acari, which also furnished a chronological indication; a portion of a bulb of a lily furnished further proof that two years must have elapsed in order that the bulb should undergo the alterations it presented. M. Brouardel dwelt on the value of these entomological data in reference to medical jurisprudence.—*Revue de Thérapeutique*, No. 13.

Antiseptic Surgery on the Field of Battle.—Among the minor contributions of modern surgery to the needs of daily life the value of which can scarcely be estimated at present, is the small package of antiseptic dressings which soldiers are required to carry with them for immediate application to wounds upon the field. This appears to have been first suggested by Dr. L. V. Lesser, of Leipsic ("Ein Kriegschirurgischer Vorschlag," *Centralblatt für Chirurgie*, 1884), by whom it was also brought to the attention of the Thirteenth Congress of the German Surgical Association at Berlin.

More recently the same ideas were advanced by Dr. Von Heydenreich, who advocated the use of corrosive sublimate instead of iodoform and carbolic acid. Lesser (*Centralblatt für Chirurgie*, No. 27, 1886) defends his former views, and condemns the use of the sublimate powder (sublimate, five milligrammes; sugar, five grammes), because of the uncertainty of the dosage (both on account of its gradual conversion into calomel by the sugar and in its relation to the extent of the wound and amount of blood or secretions present), and also for its highly poisonous properties.

The preference of Lesser is for an antiseptic powder composed of iodoform mixed with boric acid. In his polyclinic during the last two years he has practised this method of treatment in two hundred and seventeen cases of recent wounds, with complete satisfaction. The surrounding skin is first washed with ether or oil of turpentine, then the wound is disinfected with a five-per-cent. carbolized solution, dusted with iodoform, a compress of iodoform-gauze, or simply an iodoform bandage, is applied; and it is finally enveloped in wadding held in place by a roller bandage. This dressing usually suffices, the necessary surgical operations always excepted.

Irrigation of wounds with sublimate solution may have a place in field-hospitals, but is usually impracticable for the soldier in the field, and, moreover, is less in use at present than formerly. Small compresses of wadding wet with a three- to five-per-cent. solution of carbolic acid (kept in glass tubes) might be used to clean the wound so as completely to take the place of irrigation. For convenience, cheapness, and efficiency, the dressings of iodoform and carbolic acid are decidedly preferable to all others for use upon the field.

Vinegar-Applications for Diphtheritic Deposits.—Used as a gargle diluted with an equal quantity of water, or as a spray still further diluted, vinegar is pronounced by Engelmann to be an admirable remedy for the throat-affection in diphtheria, being more agreeable and less irritating than carbolic acid, and at the same time a more reliable germicide than the ordinary five-per-cent. solution of that drug.—*Centralblatt für Klin. Med.*

Chronic Eczema of Genitals and Anus.—Vidal uses the following formula:

℞ Ol. cadini, 5 parts;
Glycerit. amyli, 30 parts. M.

gradually increasing the strength until it contains fifty per cent. of oil of cade. Lotions of solutions of chloral hydrate (two and a half to five per cent.) or chloroform (one per cent.) will relieve itching.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, JULY 24, 1886.

EDITORIAL.

DISINFECTION AND DISINFECTANTS.

THE establishment of the germ-theory of disease upon the solid foundations it occupies to-day, through the labors of Pasteur, Davaine, Chanreau, Koch, Sternberg, Eberth, Gaffky, Löffler, and others, has to a great extent modified our views upon disinfectants and disinfection. Until recently the terms disinfectant, antiseptic, and deodorizer were used synonymously. Hence the older—and indeed much of the later—literature upon this subject is confusing to the physician who seeks for an intelligent account of the objects and methods of disinfection and of the agents by which disinfection is accomplished.

It is now known that all fermentation, decay, and putrefaction are due to the presence and action of minute organisms belonging to the vegetable kingdom.

An agent which arrests the development of these organisms, and thus prevents decay or putrefaction, is an antiseptic. The addition of common salt, nitrate of potash, alcohol, or sugar exercises such restraining influence, and in our domestic economy these agents are frequently used to prevent putrefactive change. If, however, the putrefactive process has once begun, the addition of the substances mentioned fails to arrest it: they do not exercise a destructive effect upon the organisms. If we destroy the latter, which we can do by heat (boiling) or bichloride of mercury, we arrest the putrefaction. This is disinfection, and the agent by which it is brought about is a disinfectant.

A deodorizer is not necessarily either an antiseptic or a disinfectant. The deodorant effect may be simply a chemical decomposition of the volatile odorous particles. Antiseptics and disinfectants may, however, in certain cases act as deodorizers by virtue of their power of preventing decomposition and the consequent formation of the gaseous effluvia attending this process.

In view of the general acceptance of the doctrine that all infectious diseases are due to the activity of micro-organisms or germs, a disinfectant has by some been considered as equivalent with germicide; but, inasmuch as this has not been proved, it is better to define a disinfectant as *an agent which is capable of destroying the infective power of infectious material.** This definition does not commit us to any theory as to the nature of such infectious material.

Clearly, the only way in which the efficiency of a disinfectant can be absolutely demonstrated is by testing it upon known infectious material. If any substance of known infective power is exposed to the action of an agent and loses its infectivity, the agent so tested is a disinfectant. The pathologist has at his command such infective material in vaccine virus, anthrax, and tubercle-bacilli, the micrococci of erysipelas, and various septicæmic processes, and tests have of late years been frequently made with these materials and their results placed upon record.

Although Dougall, Hoppe-Seyler, Baxter, Braidwood and Vacher, Davaine, and others had made praiseworthy attempts to fix the disinfectant value of certain agents by the biological test, the work of Sternberg,† Koch,‡ Wolffhügel,§ Fischer and Proskauer,‖ Parsons,¶ and the Committee

* Report of the Committee on Disinfectants of the American Public Health Association, 1885, p. xi.

† Report of the National Board of Health, 1880, p. 318, and American Journal of the Medical Sciences, April, 1885.

‡ Mitth. a. d. Kais. Gesundheitsamte, Bd. i.

§ Ibid.

‖ Ibid., Bd. ii.

¶ Fourteenth Annual Report of the Local Government Board, 1884-85.

on Disinfectants of the American Public Health Association * has introduced scientific accuracy into this study, and shown the untrustworthiness of most of the older observations upon this subject.

From the experiments hitherto made, it appears that infectious material the infectivity of which is due to the presence of micro-organisms may be divided into two classes, depending upon whether the reproduction of the organisms is due to simple fission or to the formation of spores. Organisms which increase through spore-formation,† as the bacilli of anthrax or tuberculosis, require a much more energetic action for their destruction than the simpler organisms, micrococci for example. Erysipelas, cholera, purulent infective processes, and perhaps smallpox, scarlet fever, measles, and similar diseases, may be regarded as due to sporeless organisms, and less active disinfectants will be required to destroy their infectivity than the former class.

The report of the Committee on Disinfectants above referred to, and the Lomb prize essay of Dr. G. M. Sternberg,‡ contain a careful summary of nearly all the experimental work of value recently done. From these publications we learn that the following are the most efficient disinfectants at our command, being capable of destroying all known disease-germs, including their spores.

1. Complete destruction by fire.

2. Boiling in water for half an hour, or steam under a pressure of twenty-five pounds to the square inch for ten minutes.

3. Solution of mercuric bichloride, one to five hundred.§

4. Solution of chloride of lime (chlorinated lime, bleaching powder), one to twenty-five.

5. Solution of sulphate of copper, one to twenty.

6. Solution of carbolic acid, one to twenty.

The methods of using these agents cannot be stated here in detail, but some hints as to their employment may be given.

All alvine excreta of cases of typhoid fever, yellow fever, and cholera should be immediately disinfected. The vomited matters in cholera and yellow fever and the sputa of cases of tuberculosis, diphtheria, and scarlet fever should likewise be subjected to the action of a disinfectant. All disinfection must be thorough; partial disinfection is equivalent to no disinfection. As the Committee on Disinfectants expresses it, "There can be no partial disinfection of such [infectious] material: either its infecting power is destroyed or it is not."‖

Alvine discharges should be received in a receptacle containing at least a quart of the disinfectant, in order that any infectious matter contained in the injecta may be immediately rendered innocuous. So, too, sputa or vomited matters should be received in vessels containing a quantity of the disinfecting agent, or immediately covered with the same. Disinfection must not be postponed until the matters have been thrown into a privy or common sewer. It is then in most cases too late to disinfect thoroughly.

Handkerchiefs, napkins, or other articles of linen, wearing-apparel, or bedclothing, when infected, should be immersed in a solution of mercuric bichloride, one to two thousand, and allowed to remain in it for four hours before being sent to the laundry. Articles of slight value should be burned. Mattresses and such other articles as cannot be washed

* Report, 1885.

† It is, of course, well known that the bacilli may also increase by subdivision.

‡ "Disinfection and Individual Prophylaxis against Infectious Diseases." This is probably the most valuable work upon this subject accessible to the profession generally. It can be obtained of the Secretary of the American Public Health Association, Concord, New Hampshire, U.S.A.

§ This should be colored with permanganate of potassium (1 to 500), or sulphate of copper (1 to 125), or by some other stable coloring-matter.

‖ Report of the Committee on Disinfectants, 1885, p. 128.

should be subjected to the action of steam under a pressure of twenty-five pounds.

Furniture, table-service, etc., when infected, should be washed with a solution of mercuric bichloride (one to one thousand), carbolic acid (one to fifty), or chloride of lime (one to one hundred), before being cleansed in clean water.

After a room in which a patient sick with an infectious disease is vacated, it should be thoroughly fumigated with sulphur dioxide. Three pounds of brimstone, broken into small fragments, should be burned for every one thousand cubic feet of space. All crevices should be carefully closed, and the room should not be opened for twenty-four hours. It should then be exposed to a free circulation of air, and afterwards the internal walls, doors, and windows washed with a solution of mercuric bichloride (one to one thousand).

The customary saucer of chloride of lime exposed in a room, or the favorite portière saturated with carbolic acid which health-officers suspend in the door-ways of rooms where infectious diseases are treated, are worse than useless, because they tend to give a false sense of security against the spread of disease.

THE USE OF COCAINE.

HAVING survived the enthusiastic reception by the profession which attended its re-introduction by Koller in 1884, cocaine has about settled down to its legitimate place, which is not an unimportant one, in our therapeutics. It is worthy of note that, although employed in almost every condition possible, and in many cases manifestly improperly both as to the dose and the morbid condition, so few cases of serious toxic symptoms have been reported; and in some of these the hysterical element, or some other hidden cause, may have had more to do with the condition of the patient than the remedy itself. From its general resemblance to caffeine, indeed, its comparative innocuousness in ordinary doses might be inferred.

Schwarzbach (*Australasian Medical Gazette*, January, 1886) reports a case of a lady who had used cocaine solution for pain in the eye due to trichiasis. At the end of the second day of its use she was taken suddenly very ill. She was found tending to stupor, pale, pulse slow although full, and a cold perspiration on her forehead. She was restored by wine and strong coffee, and was all right in a few hours. This is a type of the cases of poisoning, a number of which have appeared in our journals.

Individuals with certain forms of nervous disease seem more susceptible to the influence of cocaine than others. The case of the physician in Chicago who made experiments upon himself and his family with cocaine, and who was afterwards sent to the insane asylum, has been widely published as a result of the abuse of cocaine. It is a specimen of the loose reasoning that is so fatal to therapeutic progress.

With regard to the eye itself the case is different: here experience has demonstrated that bad results may follow as the result of—1, solutions being too strong; 2, too long continued; 3, contaminated by bacteria; and probably, 4, on account of some idiosyncrasy of the patient.

It is possible that the alkaloid as it comes from different laboratories varies in strength, and some specimens have been found contaminated with some other principle which has the power of dilating the pupil and causing dryness of the throat, like atropine. Apart from the use of impure or adulterated cocaine, it has been observed, owing to the contraction of the blood-vessels following the application and consequently reduced nutrition of the anæsthetized parts, that sloughing may follow where cocaine has been freely used; and Pflüger has reported two cases and Bunge six cases of neuro-paralytic keratitis, fol-

lowing the operation of extraction of cataract. In these cases an ointment of cocaine with vaseline had been applied.

Some interesting observations recently made by Dr. C. B. Penrose at the Pennsylvania Hospital, under the direction of Professor Da Costa, direct attention to a new and probably useful property of cocaine.* In some previous researches upon the physiological effects of hypodermic injections of this remedy it had been observed that it seemed to increase the flow of urine.† Further investigation has demonstrated that cocaine possesses a decided diuretic influence, and its applicability to the treatment of dropsy attendant upon a weak heart and certain cases of uræmia with scanty secretion of urine is suggested. The opinion seems well founded that it deserves a trial in these and similar conditions.

THE RIGHTS OF THE CITIZEN AS TO SEWERAGE IN CITIES.

MATTERS affecting the public health are becoming more frequent subjects of litigation with each year, and the rights and duties of municipal authorities and Health Boards are continually demanding determination.

In a case recently tried in Brooklyn it was held that a citizen had a claim against the city for damages resulting from a failure to construct proper sewers, and this was decided to be the case notwithstanding the general rule that cities are not responsible for the failure of ordinances to accomplish what was intended in the way of public improvement. The city of Brooklyn, it seems, was empowered to create a general system of drainage, and in one part of the city in 1868 laid out a large sewer into which lateral sewers were to be built as the wants of the neighborhood demanded. Within a short time after the completion of the main sewer, actual use demonstrated that it had not sufficient capacity to carry off the accumulations of water and matter turned into it, and the result was that at times of heavy rain and melting snow the collected sewage, being obstructed in its flow, was forced through the man-holes and inundated the district in which the plaintiff resided, inflicting serious injury to his property.

The inundations commenced nearly ten years previous to the trial, and had increased in frequency and severity as new lateral sewers were from time to time built and connected with the main trunk, until finally they occurred as often as eight or ten times a year, and became well known to the officers of the corporation. Notwithstanding this fact, the corporation continued to build and attach lateral sewers to the main trunk, and increased from year to year the evil produced by the defects of the original plan. Under these circumstances the plaintiff brought his suit for damages against the city, and the court held that it could not plead any exemption from liability on the ground that the sewers were intended for the public benefit, but must pay when it was proved that harm had resulted from its own neglect in not providing proper sewers.

In Baltimore recently a somewhat similar suit was tried, and resulted in establishing the liability of the city for harm resulting from neglect of the sewers.

The city authorities converted a running stream into a sewer by covering it over and appointing persons to keep it in repair. The question here seemed to be whether the owners of adjoining property had parted with ownership of the bed of the stream to the city, but the court decided that this point was not material, as the city was as much liable for harm from a sewer which it owned only in part as if it owned it entirely.

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* Medical News, June 19, 1886.

† Transactions of the College of Physicians of Philadelphia, 1884.

LEADING ARTICLES.

THE PRESENT STATE OF THE DOCTRINE OF PARASITISM IN DERMATOLOGY.

THE current doctrines of pathology attribute to minute organisms in the blood or tissues the origin of a large number of morbid conditions. The general belief of the medical profession, whether correct or not, seems to be in favor of the theory which ascribes to parasitic organisms of a vegetable nature the origin of the specific fevers, tuberculosis, pneumonia, septicæmia, and various local infective processes.

It would be strange if dermatologists failed to appreciate the etiological importance of bacteria and other minute organisms in the production of skin-diseases, especially since the first definite support which the parasitic theory of disease received came from the domain of dermal pathology.

Vegetable parasites producing skin-diseases may be divided into two classes,—those which produce only a superficial or local irritative effect, and those which produce, in addition, locally, destruction of tissue or general infection of the system.

It will be shown that the former belong to that class of organisms known as fungi, while the latter are included among the schizomycetes, or fission-fungi, or, briefly, *bacteria*.

I.—VEGETABLE PARASITES PRODUCING SUPERFICIAL OR LOCAL IRRITATIVE EFFECTS.

The commonly recognized parasitic skin-diseases are favus, ringworm, and chloasma. They are generally grouped together under the generic term *tinea*, first applied to them by the late Dr. Tilbury Fox, and the individual diseases are technically known as tinea favosa (favus), tinea trichophytina (ringworm), and tinea versicolor (chloasma).

The organisms producing these diseases belong to the class fungi, and are easily recognizable under a comparatively low power of the microscope (three hundred to five hundred diameters).

Most pathologists, following the authority of the leading botanists in this field, regard the different organisms as separate species, although some dermatologists and pathologists—among whom are I. E. Atkinson, Neumann, Grawitz, and others—believe that the parasitic fungi found in skin-diseases are merely stages of development of one or other of the common mould fungi so widely distributed in nature.

The conclusions of these investigators have, however, not been generally accepted, although the view defended by them has received support from an observation of Hebra, who produced a mixed eruption resembling ringworm and favus by the prolonged application of moist, mouldy compresses to the skin.

The parasite of favus—achorion Schoenleinii—was discovered in the characteristic crusts of the disease in 1839 by Schoenlein, and fully described by Gruby in 1841. In the following year, Remak proved the etiological relation of the fungus by inoculating the disease upon healthy individuals. No one questions at the present day the entire dependence of favus upon the presence of this parasite.

In 1843, Malmsten and Gruby discovered the parasite of ringworm independently of each other. The former gave it the name trichophyton tonsurans, by which it is now known.

Ringworm presents clinical differences as it appears on different portions of the body, and it seems that climatic differences also produce marked changes. Thus, it is generally believed that the various dermatophytic diseases described by English observers in the East under the names of Burmese ringworm, Malabar itch, Tokelau ringworm, tinea imbricata, etc., are merely varieties of the disease produced by the same fungus under different conditions of growth. It is proper to mention, however, that this view is combated by some,* who assert that the parasites in certain of these affections belong to different species from the trichophyton tonsurans.

The remarkable clinical differences exhibited between ordinary ringworm of the beard and parasitic sycosis led many to question the identity of the fungus in the two affections. But the elaborate researches of Dr. I. E. Atkinson upon the nature and clinical relations of kerion showed conclusively that the trichophyton fungus was quite capable of producing as intense irritation as was observed in parasitic sycosis. There is no longer any question of the

* Manson, on Tinea Imbricata, in Customs Medical Reports, No. 14.

close etiological relationship of ringworm and the latter disease.

When the trichophyton fungus invades the skin of the perineum, scrotum, and inner surfaces of the thighs, it produces an affection differing considerably from ringworm on other parts of the body. The almost constant moisture of the parts and the friction of the opposing surfaces of the skin cause an eczematous eruption, which complicates the parasitic affection. The decidedly eczematous character of the disease in nearly all cases, combined with its sharply-defined borders, induced Hebra to name it eczema marginatum. Burqhardt, however, in 1859 discovered a microscopic organism in the epithelial layer of the affected skin. This parasite, which is much smaller than the ringworm parasite, Von Bärensprung named microsporon minutissimum, and to the disease he gave the name *erythrasma*. Köbner, Pick, and Kaposi have, however, demonstrated the identity of the fungus in this disease with that of ringworm.

Recently Dr. Riehl* returns to the names given by Von Bärensprung to the disease and its causative parasite; but Bizzozero, in a paper on the micro-organisms normally found upon the human skin,† states that a fungus very much resembling the microsporon minutissimum is found abundantly in the preputial smegma and the parts with which the penis normally comes in constant contact,—*i.e.*, the scrotum and inner surfaces of the upper part of the thighs. He thinks this fungus has no pathogenetic significance. The view that crural ringworm is merely a variety of ordinary ringworm and dependent upon the trichophyton fungus, seems to be now definitely established.

The trichophyton fungus, as well as that of favus, may attack the nails and produce a destructive effect upon these organs.

Chloasma, or so-called "liver-spots," is still regarded by many as a disease of internal origin, and often diagnosticated and treated as a manifestation of syphilis. Its parasitic nature was, however, established as early as 1846 by Eichstedt, who gave to the parasite found among the branny scales scraped from the pigmented patches the name microsporon furfur.

Schwartze,‡ Wreden,§ and Steudener‖ have called attention to a form of chronic external otitis depending upon the presence of fungi in the external auditory meatus. The membrana tympani is covered with a whitish deposit, which rapidly develops into a coherent pseudo-membrane. Upon removal of this the surface of the drum-membrane appears dark red, swollen, and denuded of epithelium. The parasites found are different varieties of aspergillus, especially Aspergillus nigricans and A. flavescens. Mucor is also sometimes present. Wreden has named the affection myringomycosis aspergillina. Koch has recently shown that A. flavescens may cause a fatal infectious disease in rabbits when injected into the circulation.

To these diseases, which must unquestionably be regarded as parasitic, may be added several others which present many evidences of a parasitic nature, but in which the constant presence of the organism has not been incontestably established. One of these diseases is a curious affection prevailing in Mexico and Central and South America, where it is known as mal de los pintos, mal pintado, or tinna carate. It consists of discolorations of the skin, accompanied by furfuraceous desquamation and itching,—in short, the symptoms of tinea versicolor. The coloration of the affected parts is varied: black, gray, blue, red, and dead-white. The disease is chronic, does not affect the general health, and is contagious. Gastambide¶ gives the fullest account of it. He claims to have found a micro-organism consisting of spherical or oval bodies lodged between the deeper cells of the epidermis. Mycelial tubes were also found. The affection occurs especially among the poorer classes, where cleanliness is neglected.

The late Dr. Tilbury Fox first described an acute bullous eruption, mostly occurring in children, resembling in some respects pemphigus, but distinctly contagious. Some of the recent German authors, as Geber, Lang, and Weyl, regard the disease as merely a vesicular or bullous form of ringworm. But this view is not accepted by English or American dermatologists. De Wèvre describes** a fungus found in the base of the blebs. The mycelium, which is abundant, has a diameter of .003 m., and is filled with spores. On the other

* Wiener Med. Wochenschrift, Nos. 41 and 42, 1884.
† Virchow's Archiv, xcviii. p. 441.
‡ Arch. f. Ohrenheilk., Bd. II. p. 5.
§ Ibid., Bd. III. p. 1.
‖ Ibid., Bd. V. p. 163.
¶ Presse Méd. Belge, 1881.
** Arch. de Méd. et de Pharm. Militaires, September 16, 1885; Journ. Cut. and Ven. Dis., February, 1886.

hand, Crocker,* O. Simon, Colrat,† Pulvermacher,‡ and Pogge § have described micrococci found in the fluid of the bullæ. The latter and Colrat succeeded in cultivating the organism in bouillon, on nutritive gelatin and potatoes. Inoculations with the pure cultures produced blebs resembling impetigo contagiosa. These results would indicate that the parasite producing this disease has been discovered; but further observations are needed to establish positively its etiological relation.

Ceci,‖ Barthélemy,¶ and J. Wickham Legg** have announced the discovery of micrococci in the blood in cases of purpura hæmorrhagica. On the other hand, Watson Cheyne†† found bacilli in the affected tissues in several cases. In two fatal cases Legg failed to find organisms either in the blood or the tissues. The evidence in favor of regarding purpura as a bacterial disease seems to be insufficient.

Alopecia areata has frequently been claimed as a parasitic disease. The late Dr. Tilbury Fox was an ardent supporter of this view. Recently Von Sehlen‡‡ found micrococci attached to the hairs in cases of this affection. Pure cultures of this micrococcus inoculated upon young dogs and white rats produced scaling and loosening of the hairs in the follicles. The same cocci were found in the hair-follicles of the inoculated animals, and could be further cultivated upon peptone agar-agar. Corrosive sublimate (parasiticide) lotions cured the disease. A series of experiments by Max Joseph,§§ very lately made, however, seem to show conclusively the trophoneurotic nature of this affection. Neurectomy of the second cervical nerve in cats and rabbits was followed by falling of the hairs in a manner strongly resembling alopecia areata.

The furfuraceous desquamation of the scalp accompanied by falling out of the hair, commonly known as dandruff, and which most American dermatologists attribute to seborrhœa, is considered by several European observers to be due to a parasite. Malassez nearly ten years ago described the organism found by him in cases of the affection. Lassar and Bishop‖‖ claimed to have demonstrated the contagious nature of the disease by mixing the finely-cut hairs from a case with vaseline, and rubbing the ointment so obtained into the skin of rabbits and guinea-pigs. In three to four weeks the spots so treated had become bald. Michelson, however, produced the same effect by the inunction of a healthy rabbit with a mixture of vaseline and rancid olive oil.¶¶ More recently, Oudemans and Pekelharing claim to have discovered a fungus in pityriasis capitis. This they have named saccharomyces capillitii.***

Although the evidence is too meagre to justify the acceptance of the parasitic nature of this common and annoying affection of the scalp, some support is lent to this view by the results of a parasiticide method of treatment. The use of carbolic acid, or salicylic acid and sulphur ointments, with careful attention to cleanliness of the scalp, will often result in a cure.

Psoriasis, in its mode of local progression, possesses some of the characters of a parasitic disease. E. Lang††† first described a fungus which he declares to be constantly present at the base of the squamous accumulations in this disease. As figured by this author, it bears strong resemblance to a luxuriant culture of oidium lactis. H. Schulze in a monograph ‡‡‡ confirms the discovery of Lang, and, consistently with the view of its parasitic nature, treats psoriasis with parasiticides. He claims not merely positive but permanent cures from his method of treatment. The remedies used are warm baths and inunction of Goa-powder (chrysarobin) ointment. The latest defender of the parasitic nature of this disease is A. Wolff,§§§ who also finds the fungus termed by Lang epidermophyton in all cases. This last author believes that the parasite enters through the circulation, and that when arrested in the cutaneous capillaries the irritation it produces causes psoriatic lesions!

In a disease apparently closely allied

* Lancet, 1881.
† Rev. de Méd., No. 13, 1884.
‡ Monatsh. f. Prakt. Dermatologie, No. 2, 1885.
§ Corr. Bl. d. Aerztevereins d. Reg. Bez. Stralsund, No. 22, 1885.
‖ Arch. f. Exp. Pathol., 1881, p. 641.
¶ Arch. Gén. de Méd., 1882, vol. ii.
** Trans. Pathol. Soc. London, 1885, p. 487.
†† Ibid., 1884, p. 412.
‡‡ Virchow's Archiv, xcix. p. 327.
§§ Centralblatt f. d. Med. Wissenschaften, No. 11, 1886.

‖‖ Monatshefte f. Prakt. Dermatologie, Bd. I., 1882.
¶¶ Anomalien des Haarwachsthums, in V. Ziemssen's Handbuch d. Hautkr., II. Theil, p. 92.
*** Quoted in Ctbl. f. d. Med. Wiss., No. 6, 1886.
††† Ueber Psoriasis. Volkmann's Samml. Klin. Vorträge, No. 208, 1881.
‡‡‡ Ueber Psoriasis und deren Behandlung, 1882; Monatsh. f. Prakt. Dermatol., September, 1882.
§§§ Viertelj. f. Dermatol. u. Syph., 1884, p. 337.

clinically to psoriasis,—namely, lichen ruber,—Lassar* claims to have found micro-organisms in great numbers in the lymph-channels of the papular elevations. No confirmatory observations are on record.

II.—PARASITES WHICH PRODUCE LOCAL DESTRUCTION OF TISSUE.

Mycetoma, or madura foot, is a disease prevalent in the East Indies, especially among the natives. The foot is generally affected, although it is said that the hand or shoulder may likewise be the seat of the disease. The affected member becomes swollen, misshapen, perforated by sinuses, and the tissues greatly disorganized. Dr. H. Vandyke Carter, who has investigated the disease very thoroughly, has found a fungus which has been named, in compliment to the discoverer, chionyphe Carteri. The parasitic nature of the disease is not accepted by all pathologists, although it would seem to be most rationally accounted for on this view. Two cases have been reported in this country, by Kemper† and Hyde.‡ In the latter case the surface was thoroughly scraped with the curette and dressed with saturated solution of boracic acid, resulting in cure. In India, advanced cases require amputation of the limb.

Lupus is believed by many pathologists and dermatologists to be simply a form of tuberculosis of the skin. Tubercle-bacilli have been found in lupous tissues by Koch, Doutrelepont, and Neisser. These observers have also succeeded in producing tuberculosis in animals by the inoculation of lupous material. In the greater number of observations, however, no bacilli were found. Kaposi denies on clinical grounds the identity of the two affections. Morison,§ who has recently investigated the subject in the course of a thorough microscopical examination of lupous tissue, is non-committal. Neisser‖ thinks the parasitic theory should be accepted, although it is not positively established. But, in view of the great difference between the clinical history of lupus and that of tuberculosis, the writer thinks it would be premature to regard the former as identical with the latter. The microscopic evidence is insufficient to stamp it as a parasitic disease.

It must be admitted, however, that recent clinical experience with parasiticides in the treatment of lupus¶ is rather in favor of its parasitic nature.

Bacilli have been found by Frisch, Köbner, Cornil and Alvarez, Payne,** Janovsky,†† and others in the tissues, lymph-spaces, and blood-vessels of the affected part in rhinoscleroma. This is a rare disease in Europe, and, so far as the writer is aware, no cases have been reported in this country. It is said to be comparatively common in Central America.

Nearly twenty years ago, Dr. Edward Wigglesworth, of Boston, proved by inoculation-experiments upon himself that the pus of acne pustules is infective. Kaposi and Lannelongue have also shown that the pus from abscesses, boils, and pustules is inoculable. Hüter and Startin expressed the opinion that furunculosis was a parasitic affection long before micro-organisms were demonstrated in pus. Pasteur, in 1880, described an organism in pus, naming it torula pyogenica. Ogston, Cheyne, Bergeron, and Sternberg‡‡ have also studied the micrococci found in the pus of acute abscesses. Pus from so-called "cold" abscesses does not contain any micrococci. Ogston injected pus containing micrococci into animals, and found it infectious in all cases, producing symptoms of septic poisoning. Pus from cold abscesses or pus in which the micrococci had been killed by a germicide failed to produce any symptoms of infection when injected.

Recently several forms of micrococci have been isolated in pus; but they seem to have equal infective powers. Garré experimented with the micro-organisms found in the pus of acute osteomyelitis and acute cellulitis. He found, on inoculating a pure culture into the skin of the finger, a panaritium resulting. Rubbed into the unbroken skin of the forearm, the culture-mass produced a carbuncle.§§

J. A. Ruijs‖‖ determined that the inoculation of sterilized croton-oil, turpentine, or petroleum into the anterior chamber of the eye of rabbits produced fibrinous inflammation, but no pus. When pure cultures of the micrococci of pus were inoc-

* Deutsche Med. Wochenschrift, No. 32, 1885.
† American Practitioner, September, 1876.
‡ Diseases of the Skin, 1883, p. 423.
§ Amer. Journ. Med. Sci., 1884.
‖ V. Ziemssen's Handbuch d. Hautkrankheiten, I. Theil.

¶ J. C. White, Trans. Amer. Dermatological Association, 1885.
** Trans. Lond. Pathol. Soc., 1885.
†† Wiener Med. Presse, Nos. 13 and 14, 1886.
‡‡ Bacteria. Second Edition. 1884.
§§ Fortschritte d. Medicin, No. 6, 1885.
‖‖ Deutsche Med. Wochenschr., No. 48, 1885.

ulated, however, purulent inflammation with destruction of the eye followed. He consequently lays down the proposition, "No suppuration without micro-oganisms," and Sternberg, who is known as an extremely conservative observer, says, after a review of the subject, that there is strong evidence in favor of the view that the formation of acute abscess is due to the presence of the organisms found in pus. The inoculation-experiments of Wigglesworth, Lannelongue,* and Garré point to the conclusion that all pus from furuncles, pustules, or carbuncles is infectious.

III.—PARASITES PRODUCING LOCAL DESTRUCTION OF TISSUE, WITH GENERAL INFECTION OF THE SYSTEM.

Scarcely any one doubts the contagious nature of erysipelas at the present day. The frequent examples of direct communication of this disease which come under the observation of most surgeons have long settled this point. Since Hüter, in 1869, first observed micro-organisms in erysipelatous inflammation, numerous investigators, among whom Orth, Nepveu, Lukomsky, Koch, and Fehleisen are the most prominent, have demonstrated the constancy of the presence of micrococci in this disease. The organisms are found especially in the œdematous infiltrations, and in the lymph-channels of parts attacked by erysipelatous inflammation. Orth, Koch, Tillmanns, and Fehleisen have frequently communicated the disease to man and the lower animals by inoculations of pure cultures of the micrococcus. A recent Italian experimenter, Dr. Biondi, states that the micro-organism of Fehleisen may communicate not only erysipelas, but puerperal metritis and phlegmonous inflammation as well.† Gusserow, however, has lately pointed out ‡ that, clinically, erysipelas and puerperal septic processes are entirely distinct. The observations of Biondi are so contrary to those of other investigators that they cannot be accepted without confirmation.

Malignant pustule is the cutaneous manifestation of infective anthrax in man. The bacillus anthracis is found in the pus and inflamed tissues, and if general infection follows, this micro-organism is also found in the blood and internal organs. The bacterial nature of this disease is firmly established.

In 1874, Armauer Hansen § discovered small rod-like bodies, recognized as bacilli, permeating the cells of leprous tubercles. This observation of Hansen seems to have attracted but little attention until, in 1879, Neisser published ‖ the results of an examination of a large number of specimens, in all of which the organisms described by Hansen were found. Since that time the question has been studied by a number of observers, prominent among whom are Cornil and Suchard,¶ Köbner,** I. E. Atkinson and Berman,†† J. C. White,‡‡ Unna,§§ Touton,‖‖ and P. Guttmann.¶¶ The evidence seems to be overwhelmingly in favor of the bacillary nature of the disease. Köbner, Neisser, Damsch,*** and Melcher and Ortmann ††† have made inoculations with leprous material upon animals (cats, dogs, and rabbits), but did not produce any disease which could confidently be pronounced leprosy. A physician resident in Mitylene, the ancient Lesbos, in the Greek Archipelago, has even inoculated two children with pus from a leprous tubercle, but happily without producing the disease.‡‡‡

Neisser and other observers have nearly always found the bacilli within the large "lepra-cells" in the leprous infiltrations of the skin and mucous membranes. The bacilli have also been found enclosed in cells in the epiglottis and thyroid cartilage, the cornea, the testicle, the liver, the spleen, and the peripheral nerves.

Recently Unna has asserted that the bacilli are not contained within the cells, but occur free in the tissues. Touton, Neisser, and Hansen in later studies dispute this, and show that the view first stated is correct.

Verrugas is an endemic infectious fever accompanied by a peculiar eruption of the skin. The disease is limited to certain high valleys in the Peruvian Andes between nine and sixteen degrees south latitude. It is sometimes imported into the cities on the coast. Thus, Medical-In-

* Quoted by Gingeot, Bull. Gén. de Thérap., 1885.
† La Riforma Medica, No. 3, 1886.
‡ Archiv f. Gynäk., xxv. p. 169.

§ Norsk Magazin for Lægevidenskaben, 1874.
‖ Bresl. Chir. Zeitschr., Nos. 20, 21, 1879.
¶ Annal. de Dermatol., 1881. ** Virchow's Archiv, 1882.
†† Trans. Amer. Derm. Assoc'n., 1881; Arch. of Med., October, 1881.
‡‡ Amer. Jour. Med. Sci., October, 1882.
§§ Deutsche Med. Wochenschr., February 25, 1886.
‖‖ Fortschritte d. Medicin, No. 2, 1886.
¶¶ Berl. Klin. Wochenschr., No. 6, 1885.
*** Virchow's Arch., Bd. xcii. p. 20.
††† Berl. Klin. Wochenschr., No. 13, 1885.
‡‡‡ Hirsch, Hist. Geogr. Pathologie, Bd. ii. p. 32.

spector John M. Browne, United States Navy, who has written a very clear account of the disease from personal observation,* saw a case in Lima in the person of a little girl who had remained in the infected locality only two days, and refers to another which developed in Callao five months after the patient had spent one day in the verrugas country. The disease has also been observed in the lower animals. Dr. Browne gives the following description of the clinical history of the disease. "The period of incubation is from three weeks to one year; duration from a few weeks to one or two years. . . . The disease commences with a decided febrile attack, often mistaken for the access of the local intermittent, and in every case the paroxysm is accompanied by osteocopic or rheumatic pains. The fever may be present every day for weeks, but disappears at the period of eruption; until then the pains and swellings of the bones and fibrous and muscular systems exist with greater or less persistency in any part of the body, shifting in character and worse at night. When the eruption does not immediately follow the disappearance of the fever, the pains, often attended with spasmodic contractions of the fingers and toes, may continue for months, with in other respects ordinary health, suffering at night, with a sense of stiffness and soreness in the muscles during the day, when comparative comfort is present.

"Succeeding this indefinite period of fever or its absence follows the eruptive stage. The eruption consists of little isolated points, purplish red, usually acuminated, which delay not in becoming red vesicles or tubercular fungoid growths of all dimensions from the size of a pea to that of a medium-sized orange. They invade any portion of the surface, having preference for the head, face, and extremities, especially the palms and soles; also the eye, nose, and ear; and apparently affect the entire thickness of the skin. These growths are soft, vascular, and at first have a uniform surface, but ultimately a scab forms here and there, the covering becomes attenuated, the slightest friction excoriates, and veritable hemorrhages occur."

The mortality of the disease among the whites is very great, the death-rate during its epidemic prevalence reaching forty per cent. The average death-rate is twelve to sixteen per cent.

V. Izquierdo† has investigated the pathology of verrugas. He states that the tubercular growths are new formations of connective tissue, resembling in structure sarcomatous growths. In the nodules micrococci were found in the blood-vessels and packed between the cells, but not invading the latter. They are sometimes so numerous in the capillaries as to occlude them. Izquierdo believes the micro-organisms circulate in the blood, and cause the development of the growths by irritation of the connective tissue.

As bearing somewhat on this question, it may be stated that Rindfleisch claims to have discovered micrococci in the tumors of multiple sarcoma (Kaposi), mycosis fongöide (Alibert).‡

The contagious nature of glanders has been long recognized. Although Langenbeck, Hallier, Zürn, and Rindfleisch had described bacteria as existing in the blood and pus of the ulcers and abscesses of glanders, it was not until 1882 that the true nature of the disease was elucidated by Löffler and Schültz.§ These observers inoculated sterilized blood-serum of horses and sheep with particles of the nodules from the lungs and spleen of a horse which had been killed on account of glanders. On the third day, minute, transparent drops appeared on the surface of the culture, and on examination showed numerous bacilli similar in size and shape to those found by the same investigators in the diseased tissues themselves. The bacilli were cultivated through four generations in the course of a month, and a healthy horse inoculated with the pure culture. On the second day the horse became feverish, and in a week the clinical picture of glanders was complete. Further inoculations were made upon other of the lower animals, and finally a pure culture (fifth) from a guinea-pig which had been successfully inoculated with a culture of the fourth generation was inoculated into two horses. Both horses died of glanders. These observations have been confirmed by Israel. There can remain no doubt of the bacillar nature of this disease.

* On Verrugas: Medical Essays by Officers of the United States Navy. Washington: published by order of the Navy Department, 1872. P. 3.

† Virchow's Archiv, Bd. xcix. p. 411.
‡ Deutsche Med. Wochenschr., No. 15, 1885.
§ Deutsche Med. Wochenschr., No. 52, 1882.

Dispassionately reviewing the evidence presented in the foregoing, the following skin-diseases may be regarded as demonstrably of parasitic origin: favus, ringworm, chloasma, myringomycosis, onychomycosis, erysipelas, malignant pustule, leprosy, and glanders.

For the remaining diseases which have been considered, the etiological relations of parasitic fungi or bacteria must be regarded as unproved. These diseases are boils, carbuncles, rhinoscleroma, pityriasis capitis, alopecia areata, psoriasis, lichen ruber, impetigo contagiosa, purpura hæmorrhagica, mal de los pintos, mycetoma, lupus, mycosis fongöide, and verrugas. That a parasitic cause may be demonstrated in some of the latter is, however, extremely probable.

GEORGE H. ROHÉ, M.D.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

THE New Hôpital Bichat is a good example of the modern style of construction of such buildings. It is intended to give a maximum of fresh air with a minimum of material. Without doubt, the essential point in a hospital is to have the contained air constantly renewed and purified by a proper system of ventilation. This may be called the efficient cause of its salubrity, and the materials of which the buildings themselves are composed (either by their nature or from the fact that they contain moisture and shelter the ubiquitous microbe) may be the efficient cause of its insalubrity. Therefore the most air and the least material was the idea or principal object sought for in the construction of this hospital. Following modern hygienic ideas, no superposed wards are allowed. A high hospital, with the patients piled, as it were, on top of one another in stories, is a great mistake. So much was it thought so that, when the new Hôtel-Dieu here was built, after it was all finished they tore down a third story that had been put on. It still has two stories, and is not so healthy as the form of building of the description of which we are now speaking. The system used in this hospital is Tollet's, and the company that uses this architect's plan is now building several large hospitals in France, one of which, a very large one, is at Montpellier. They have already put up a number, but the Bichat is the only one as yet of the kind in Paris. It is based on what is called the "ogivale" form, which means that the ceilings are arched in the pointed Gothic vaulting style, the arches crossing the vault diagonally from one side to another. The object of having oval-shaped ceilings is to prevent any dead points in the ventilation. It is well known that in rooms with the usual flat ceilings there are places which cannot be properly ventilated, even though all the windows and doors, as well as the fireplaces, are opened. This can be readily proved by letting small air-balloons go up in such a room and seeing how they will settle in certain corners, not to be driven out by any possible regular ventilation. In the ogive form the ceilings all slope upwards in oval shape to the summit, where there are openings, in covered chimney style, which draw all air towards them, so that even with shut windows there is a constant change of air and perfect ventilation. No angles of any kind exist to harbor any of the micro-organisms. Even the floors, which are of a hard sort of asphalt, are slightly curved towards the sides and ends. No wood is used in the building except for the doors and windows and on the outside. The walls are of iron, or of brick in places; and the roof is separated from the vaulted ceiling by a wide space which has its air renewed constantly. The disinfection of the building is accomplished by an ingenious system quite as good as the old style of burning the hospital down, and much cheaper. It is easily accomplished by applying a coat of petroleum to a portion of the plastered inside wall (which is painted) and then setting it on fire. This gives a heat of about 110° C., which is quite enough to kill infectious germs. This is proceeded with until all the inside walls and ceilings are treated, and they are all then repainted, the floors washed down, and new beds and bedding supplied; when it is as good as a new hospital. There are four of these Gothic wings in the Bichat Hospital, besides a central building. The hospital also has a great advantage in position. It is in one of the bastions of the line of fortifications by which this city is surrounded, that the buildings have been constructed, forming one of a proposed circle of small hospitals that are to surround the city if the hygienists have their way. This one overlooks the country outside, being at the outskirts of the town, standing on the Boulevard Ney. It contains only one hundred and eighty-four beds, but, like most of the Paris hospitals, it has many extra cots, and usually has over two hundred patients in the wards. It is in reality quite a *maison de santé*, as the French call the smaller private hospitals. It is here that Professor Terrier performs his very successful surgical operations on women, such as ovariotomy and hysterotomy.

Without giving the details which have appeared *in extenso* in the *Revue de Chirurgie*, we may speak of one of his late operations (having seen one to-day) of vaginal hysterotomy. In this he was assisted by Professor Richélot. Only a few days ago, Dr. Terrier

communicated to the Société de Chirurgie an observation of this style of operation, of which this was the fifth that he had performed. As a rule, they were in cases of uterine cancer. The last was a woman of 44 years, with an epithelioma which had not as yet attained any great extent. For several days before the operation she had been submitted to frequent injections with a solution of corrosive sublimate, and during the intervals the vagina was kept filled with iodoformed gauze. The operation of hysterotomy was very neatly and expeditiously performed. In place of tying the broad ligaments, two long pressure-pincers were put on and left forty-eight hours in place. In regard to the other patients who had submitted to this operation, one of them, operated upon one year ago, is still quite well; another, seen six months ago, was also without any return of the disease.

The medical service of the Hôpital Bichat is under the charge of Drs. Henri Huchard and A. Gouguenheim. We called attention in a former letter to Gouguenheim's intra-pulmonary injections of corrosive sublimate, and following his service we have been kindly permitted by him not only to see but also to perform this operation. It is very simple indeed, and is now the constant and regular practice in Dr. Gouguenheim's wards. As soon as auscultation and percussion have shown that a cavity exists, this treatment is ordered. A solution of mercuric chloride (one to two thousand) is taken up in a small syringe, with a longer needle than that used for hypodermic service; a little carbolized oil is rubbed over the needle, and it is then inserted between the second and third costal cartilages into the lung-tissue, the patient being directed for the moment to stop breathing and keep his mouth shut. This is done in front and also to the side of the lesion. Care is taken to keep a little distance from the sternum, for fear of touching the internal mammary artery. The direction is then given to press the handle of the syringe down *very slowly* until some twenty or thirty drops have been injected. *Should the patient cough, the needle is at once withdrawn*, no matter what quantity has been used. This is considered the important point here. The patient is instructed not to talk for some time after the operation. As a rule, this is very well borne, and does not cause any pain. From personal experience it can be recommended as a painless operation, and quite as easy to perform as a hypodermic injection. In most cases there is a considerable benefit derived from this treatment. One woman, seen this morning, who had come in with severe cough, after the third or fourth injection has lost all cough, and now seems to be on the way to great improvement. Of course the usual medical aids in phthisis are not to be neglected, but continued with the injections. The solution may be stronger than that above mentioned; it may be used one to one thousand, or even above this strength. Dr. Gouguenheim does not approve of mixtures for these injections, but prefers to use the solution of corrosive sublimate alone. He, however, thinks that carbolic acid might be tried, or even iodine, but singly, and not as recommended by a recent writer,* who gives a prescription including atropine and morphine, etc., intended to calm pain, no doubt; but the operation, *per se*, *does not cause pain*, and if the injection causes pain, or even coughing, it is not used here. In conclusion, these intra-pulmonary injections can be highly recommended as giving no pain and causing considerable improvement in symptoms.

The position of *médecin des hôpitaux* is one that is very difficult to get in Paris. As it is only given, like most of the medical places, after a public examination or *concours*, it brings out the best obtainable talent. The pay of the hospital doctor is small (six hundred dollars a year), but the opportunity for distinction is very large, and the privileges are great. For instance: although they are divided into physicians and surgeons, they are not compelled to stick to any certain routine, for they can establish besides their usual polyclinic any treatment of special diseases they choose. So, at this hospital above described, Dr. Terrier makes a specialty of surgery of women, and Dr. Gouguenheim takes up diseases of the throat. Indeed, his service is about the only one here in which such diseases can be studied to advantage. Two dark rooms have been fitted up with all the modern instruments to give free instruction in laryngeal and pharyngeal diseases, with rhinology. The number of patients presenting is quite large, and interesting cases are numerous, which are usually reported in the journal of which Dr. Gouguenheim is the editor.†

Among the patients now under treatment in his general ward is one whose case has attracted my attention and deserves mention. A man, aged 40, was brought to the hospital with a diagnosis of typhoid fever; his temperature was 104° F. (40° C.); he had severe headache, with slight diarrhœa, and had reddish marks on his abdomen. He was at once put on the usual treatment for typhoid fever; but, on the doctor making his usual morning visit the day after, he noticed that the man's lower lip looked swollen and red. On examination, this proved to be a chancre (syphilitic), and the red marks on the body proved to be roseola. Mercury was ordered to be rubbed under the axilla and on the legs, when, a day or two later, the erythema was

* Dr. John Blake White, "On Intra-Pulmonary Injections of Carbolized Iodine." *Medical Record*, May 22, 1866.

† Annales des Maladies de l'Oreille, du Larynx et du Pharynx.

gone. Here, then, was an instance of false typhoid fever, in reality a *syphilitic fever*, which has been so well described by Professor Fournier; and without the chancre on the lip, it might well have passed without being recognized.

Stricture of the Urethra and Internal Urethrotomy.—A recent clinical lecture of Professor Guyon's and a discussion on these subjects permit us to collate the latest ideas of the principal French surgeons on these interesting topics. Dr. Guyon reported the case of a patient 64 years of age, who since the age of eighteen had had several attacks of blennorrhagia, and in 1870 had his first difficulties in micturition. M. Guyon said that notwithstanding the patient had a dilatable stricture, he would cut it; and on this statement he proceeded to give some points about stricture that have been as yet not well brought out. As a rule, but little is said in regard to the form, the extent, the hardness, and even its seat is usually not well defined. One point that he advanced was that stricture of the membranous portion, properly speaking, does not exist, though described, for (except cases of traumatism) the seat of strictures is always in the anterior portion of the urethra, and here they may extend from the anterior to the posterior meatus. Another point which should be always stated is the fact of its being dilatable or not. The cause here is of great importance; for a traumatic stricture has much less chance of being dilatable than that of blennorrhagia; also penile strictures are less dilatable than perineal. In order to get proper ideas about a stricture, Dr. Guyon advises catheterism with the olive-shaped bulb explorator. With its use, in the case in question, he was able to state that there was a stricture with a number of rings, that it was dilatable, and its seat was in the anterior portion of the urethra. If the exploring instrument is stopped, notwithstanding that you use smaller and smaller numbers, you will say that there is a stricture; which may be so. But, to prove it, you should *pass by the stricture;* and the present case shows the importance of this, as, ring by ring, the Professor was able to show that a number of strictures existed, and then the passage was clear to the bladder; and in withdrawing the instrument the sensations given were even more conclusive, as the olive came successively against the seat of the constrictions. The length by measurement, and multiplicity, were thus made out. As a rule, in such cases, the stricture is dilatable; but, the patient in question being subject to shivering and fever when it was attempted, it was rejected. It is just in such cases that internal urethrotomy has its advantages: so that the surgeon should know that if he has the chance of this last operation when the stricture resists dilatation, he also can use it when general symptoms or other considerations render the dilatation dangerous.

Professor Le Fort, speaking at the Société de Chirurgie, opened the discussion on this subject. He never uses either internal urethrotomy or divulsion, but introduces a conducting bougie (which can be facilitated by first passing a large conical one up to the level of the stricture and pressing on it for a moment. This will give a conical point, and at its middle will be found the place to pass the finer bougie). This having been done, a solid conical bougie is screwed on to the first one, and dilatation can be proceeded with without forcing. Dr. Le Fort thinks that any other method may lead to complications.

Dr. Tillaux said that he for his part did not adopt any exclusive method, and, while believing it best to use dilatation as long as possible, he did not hesitate to abandon dilatation as soon as the larger sounds could not be used or when they could not be supported by the patient, and then he proceeded to internal urethrotomy.

Professor Trélat was not of the opinion that internal urethrotomy was a dangerous operation, and thought it gave excellent results; but that one should do all that could be done first in the way of dilatation. In any case it could not replace dilatation, for it was in reality a method adjuvant to dilatation both before and afterwards. Owing to modern antiseptic treatment, fever tends to disappear from these operations.

Professor Verneuil said that he was also a partisan of internal urethrotomy, but did not wish to see its use exaggerated, as it certainly had grave contra-indications, and when the bladder and kidneys were diseased he often preferred external urethrotomy.

On the Influence of Fats in Nutrition.—Dr. Débove, who recently studied the influence of water on nutrition, has been making some experiments on the above subject, and he finds that the results are very interesting. His experiments were made on man, physiologists having made such experiments only on animals. He proceeded, as he did in his experiments in regard to water, by submitting his patients, during a first period, to a fixed régime of two hundred grammes of meat, one litre of soup, and six hundred grammes of bread until he got them to an invariable weight. Then, in a second period, he added a certain quantity of oil, varying between fifty and two hundred grammes. During a third period he suppressed the fatty matter and maintained the first ration. Every day the weight was noted, and the urine was kept and analyzed. Under these conditions he saw in the second period an augmentation of weight that corresponded very nearly to the whole weight of the oil ingested, so that nearly all the fat was fixed in the tissues. This continued into the third period, as the

patients, not having any need to use the stored-up force, kept their weight. Urea diminished in the second period, which proves, what we already know, that fats act as a saving element and restrain the combustion of nitrogenized matter. During all the time of the experiment the subjects of it were kept at a fixed and regular kind of employment. To bring out the object of these researches, Dr. Débove makes this comparison. Suppose a man having a certain capital and spending the interest of it annually. At a certain moment his capital increases, or rather the interest from it; but his expenses are just the same. His capital is increased by just as much as the increase of the interest was. This was the condition of the subjects treated. In other words, a fat man is one who does not spend all his income, and to diminish his weight we must first try to make him thin, and then get him on to a certain fixed ration.

Dr. Gallard's Clinic for Diseases of Women at the Hôtel-Dieu.—The very large number of patients treated, and the fact that Dr. Gallard is the most prominent of the specialists of women's diseases in Paris, lead us to give copies of a few prescriptions in the most common forms of disease met with here. It may be stated that so frequent is the demand for these formulas that the doctor has them printed all ready for use. Even his signature is lithographed.

The following is given in all cases of *metritis* or in *anæmia:*

1st. ℞ Ferri subcarbonat., 10 grammes;
Extract. cinchonæ (soft), 10 grms;
Extract. opii aquos., 1 gramme. M.
Divide into one hundred pills. Not to be silvered.

2d. Drink iron-water at meals. To be made by putting a few iron nails in common water.

3d. Take every week two sulphur-baths, or every morning take a shower-bath of fifteen seconds.

4th. Take at the noon meal every day a wine-glass of cinchona-wine.

5th. Take once every week thirty centigrammes of powdered rhubarb at dinner (last evening meal).

The next one is given in all cases where a *uterine fibroma* has been found:

1st. ℞ Extract. hyoscyami, 3 grammes;
Plumbi iodid., 6 grammes;
Adipis, 50 grammes. M.
Sig.—Every evening use this pomade by friction on the abdomen.

2d. In the morning wash it off with soap and water.

3d. Twice a week stop these frictions, and use instead tincture of iodine painted on the abdomen.

4th. Take every day a teaspoonful of this solution:

℞ Potassii iodidi, 10 grammes;
Aquæ destillatæ, 250 grammes. M.

5th. Twice a week take a salt-water bath, and daily use very large vaginal injections of fresh water.

6th. Support the viscera with an elastic abdominal belt.

In cases of *cancer of the uterus* the following is given:

1st. ℞ Conii fructus pulveris,
Extracti gentianæ, āā 3 grammes;
Extracti opii aquos., 60 centigrms.
Divide into sixty pills. M.
S.—Take one every morning.

2d. Apply on the belly cataplasms of laudanum, as needed, for pain.

3d. Use twice a day an injection of water in which for every pint add a tablespoonful of
℞ Acid. carbolic. (crystals), 10 grms.;
Alcoholis, 250 grammes. M.
Or else add half a teaspoonful of this: Perchloride of iron (solution Pravaz) at 30°.

In all cases of women also having *phthisis* the following directions are given:

1st. ℞ Sodii arseniatis, 10 centigrammes;
Aquæ destillatæ, 250 grammes. M.
S.—Take a teaspoonful with every meal.

2d. Use as a drink an infusion of pectoral flowers, to which add syrup of tolu.

The French infusion of pectoral flowers consists of mallow, coltsfoot, catsfoot, red corn, rose or poppy, guimauve or marshmallow, etc.; and it might be remarked here that while the practice of the French physicians of giving infusions of herbs may seem to us old-fashioned, still it is wonderful to see what relief they often afford to patients.

3d. Take every evening, at least two hours after the last meal, a pill containing ten centigrammes of cynoglossum.*

4th. Paint every evening one-quarter of the chest with tincture of iodine, in such a way that you do not paint over the same place more than once in four days.

With the above internal treatment, Dr. Gallard uses the usual local applications *per speculum*, once a week, that are in use by gynæcologists.

THOMAS LINN, M.D.

PARIS, June, 1886.

COCAINE IN SEA-SICKNESS.—The *Medical Record* (vol. xxix. p. 706) lately contained a communication extolling cocaine hydrochlorate in half-grain doses for the treatment of sea-sickness, and shortly afterwards (on page 56, vol. xxx.) it is stated that "cocaine is of no value in sea-sickness." Which shall we believe?

* The pill of cynoglossum used in Europe usually contains opium, to which its therapeutic effects are probably due.—ED. P. M. T.

PROCEEDINGS OF SOCIETIES.

NEW YORK ACADEMY OF MEDICINE.

A STATED meeting was held June 17, 1886, CHARLES CARROLL LEE, M.D., Vice-President, in the chair.

ALEXANDER'S OPERATION—ITS APPLICATION TO UTERINE DISPLACEMENTS.

Dr. W. M. POLK read a paper on this subject. The operation consisted in shortening the round ligaments,—structures which were generally considered, under ordinary circumstances, too trivial to afford much support to the uterus. But their ability to withstand sufficient traction to support easily the retroverted uterus had been demonstrated by Professor J. Williston Wright, who, at his request, experimented upon two ligaments or parts of ligaments, the part taken being the outer or the smaller end. The first did not break until the suspended weight reached five pounds, and the other four and a half pounds. Before the break occurred the ligaments had stretched to about twice their normal length, but the stretching did not begin until the weight had reached two and three-quarters pounds with one, and three pounds with the other. This experiment Dr. Polk regarded as of importance in the face of the discussion which had arisen regarding the efficacy of Alexander's operation and the power of the round ligaments to support the retroverted uterus.

The effect of equal traction upon the round ligaments was to lift the fundus of the uterus upward and pull it forward until it lay immediately behind the symphysis pubis; traction upon one ligament drew the fundus to one side and upward until it rested on the pelvic brim above the pectineal eminence.

If these ligaments were shortened, the question which would suggest itself at once was, What would happen if pregnancy occurred? Would the uterus be able to rise in the abdominal cavity? One of his patients had gone to the sixth month of pregnancy since the operation, and but for some dragging pain in the pelvis he had been unable to detect anything abnormal in the condition of affairs. The uterus could be easily felt through the abdominal walls. Alexander had reported some cases which had gone to term without accident.

The crucial test of the value of the operation was the clinical result. Without taking up the time of the Society with a review of what had been accomplished by others, he would give the results in fourteen cases which he had operated upon. In all of these, except two or three in which adhesions had existed, the result had been entirely satisfactory. In some of the cases, however, the operation had been performed too recently to judge of the permanency of the benefit experienced. Some of the patients had not reported since they left the hospital, but, as they were instructed to return in the event of any discomfort, he inferred that their trouble had been permanently relieved. Certainly at the time the patients left the hospital, with one exception, the results had been very good.

The details of the histories of three cases were read as illustrative of the three conditions for which the operation was demanded. In the first the patient was aged 35; had begun to menstruate at fifteen; had always been regular until two years ago. She had given birth to several children; the last was born two years ago. Since then she had suffered from pain in the back on the right side, shooting down into the leg; there was some leucorrhœa; the bowels were constipated and their movement was painful. Clots were sometimes passed at menstruation. The uterus was found retroflexed, but it was easily replaced. Alexander's operation was performed, and the patient left the hospital at the end of six weeks in very good condition.

In the second case the patient had begun to menstruate at twelve; her periods were regular, but painful. Fifteen years ago she lifted a heavy boiler and felt something give way in the back, with shooting pain; about a year afterwards she noticed the womb in the vagina; she was unable to work. On examination, the womb was found completely outside of the vagina. The patient was operated upon by Alexander's operation, and subsequently the perineum was sewed up and the vagina narrowed. The patient made an excellent recovery. At the time of the operation the uterus measured four inches; at the time she left the hospital it measured two and a half inches.

The third case was one in which the patient complained a great deal of dragging pain about the back; pain was greatly aggravated during bimanual palpation. Under ether, nothing abnormal was found except a prolapsed and very sensitive ovary. Alexander's operation was performed, with the result of lifting the ovary and relief from pain.

The cases to which the operation was applicable were those of retroversion and retroflexion of the uterus without adhesion to adjacent viscera, those of prolapsus of the uterus, and those of prolapsus of the ovaries. No case should be operated upon in which relief could be obtained by the use of a pessary, also none in which the uterus was firmly fixed in the hollow of the sacrum.

The operation was called for in every case of prolapsus of the uterus. Dr. Polk gave more at length the reasons why the operation was demanded in these cases in which other measures had so often failed. He did not regard Alexander's operation alone as sufficient for the relief of procidentia uteri: in connection with it, the perineum should be repaired and the vagina narrowed.

Speaking of the operation itself, Dr. Polk said it might naturally be inferred that some vesical disturbance would follow it, but such had not been the case in any of his operations. He also called attention to the fact that those who had operated only upon the dead subject would find that the operation was more difficult than when performed upon the living subject. If properly performed, the operation was a simple procedure: it was as simple as sewing up the lacerated cervix. No more preparatory treatment was necessary than was required in any other surgical operation. The patient was better for having the bowels move; she should take a general bath; the pubes should be shaved and washed with soap and water. Ether being required, there should be the usual abstinence from food. The entire operation should be as carefully performed as if it were intended to enter the peritoneal cavity. Observance of strict antisepsis would prevent the occurrence of suppuration and sinuses, which were so likely to occur in this locality. The operator need trouble himself about no other guide than the spine of the pubis. Having found that, he should cut boldly through the tissues, the objective point being the external inguinal ring, which was situated in the fibres of the external oblique muscle. These fibres were glistening and different in appearance from anything with which they were associated. Having isolated the external ring, the round ligament would be found in a mass of fat and blood-vessels, probably moving up and down with the respiratory movements of the peritoneum. Putting his finger upon it, the operator would find that it sank into the external ring. He now made traction with the hæmostatic forceps, drawing out the fat and blood-vessels, when the round ligament would appear and present its distinct structure. The cord should now be grasped with a second pair of hæmostatic forceps and dragged out, disconnecting it from its attachment to the peritoneum and walls of the ring. The uterus was next placed in its proper position, preferably by the sound; if it could not thus be done, then by the fingers of an assistant introduced into the rectum. The operator should carefully cleanse his hands after introducing them into the vagina, before returning to the operation-wound. Equal traction should be made upon the two ligaments until they held the uterus in its normal position. They should then be stitched by at least three or four sutures of the largest-sized strongest catgut to the upper face of the pubic bone and to the external ring. He would introduce a bone drainage-tube, especially if there were much adipose tissue. The outer wound was closed by silk, usually not more than three or four sutures being required. The wound was then covered with Lister dressing, and strict asepsis was observed throughout.

The external wound need seldom be more than two inches in length, but he would not hesitate to go up to the internal ring if he could not otherwise find the round ligament. He had never felt that there was any special danger connected with the operation; he had never noticed any induration at subsequent examinations. The patient was kept abed four weeks after the operation. In some cases he tamponed the vagina with cotton to retain the uterus in position, in some he used a pessary, in others the entire support was left to the round ligament from the first, and all had done well. In two or three cases the relief had not been such as he had hoped for, but they were among the first operated upon, and really the adhesions found would now be regarded as contra-indicating the operation.

DISCUSSION.

Dr. James B. Hunter said he was rather sorry to be called upon to discuss the paper, for he regarded Alexander's operation as upon trial, and argument was not worth much except as connected with much clinical experience. He had performed the operation in only three cases. He thought there was no question but what it had a future. To say that the operation was only suitable for certain cases was to say that which was true of every operation. The three patients whom he had operated upon he had examined that morning, and in all he found the uterus firmly moored behind the symphysis. He thought no one would undertake the operation when there were pelvic adhesions to any considerable extent. But in cases in which the uterus was retroverted, not firmly adherent, and there was prolapsus of the ovary, and the patient was unable to tolerate a pessary, the operation offered advantages which no other procedure possessed. There had been some doubt, as suggested by Dr. Polk, regarding the danger of peritonitis. As bearing upon the possible danger of exciting inflammation of the peritoneum, he would say that while experimenting upon the cadaver he had been surprised to be able to draw the peritoneum through the internal ring by pulling upon the round ligament. This fact had been explained on the supposition of inflammatory adhesions. But if it could take place on the cadaver, why not on the living subject? He did not regard the operation as difficult. In one instance he found the extremity of the round ligament so small that he questioned whether it would be strong enough to afford any support to the uterus. On drawing it out, however, it became larger and larger until all doubts as to its ability to support the uterus disappeared.

Dr. W. T. Lusk said that up to the present time he had been chiefly an observer of the work of others regarding Alexander's operation. At first he was rather sceptical, but he had become a complete convert to the operation. He believed it was destined to do a great deal of good for working-women. It

was only moderately difficult, and with proper precautions he thought it should not be attended by any serious danger; the accidents which had been reported could have happened in the simplest operations. He asked, Was it not possible to do with pessaries all that could be accomplished by this operation? He answered, positively, No. Pessaries were good things for the rich, who were able to ride in a carriage, sit on the sofa, and have others do their work; but pessaries were not, in many instances, sufficient for the working-class. The only question with regard to which he was in doubt was as to the effect of the operation upon pregnancy. Alexander had reported two cases of confinement after the operation; but the number had not been sufficient.

Dr. H. J. Boldt had experimented upon the cadaver alone, and had had some difficulty in finding the round ligament. He thought the uterus should be lifted into position by the ligaments without the aid of the sound, in order to learn whether the ligaments were sufficient alone.

Dr. Lee had performed Alexander's operation in three cases, all in private practice, and all within eighteen months. The ultimate result had been good in each case, but in one an abscess formed. The operation was performed for retroversion or retroflexion. The uterus retained its improved position in each case. He thought, with Dr. Hunter and Dr. Lusk, that the operation had a great future in the class of cases so well described and limited by Dr. Polk in his paper.

Dr. Polk closed the discussion, and said he had received a note from Dr. Jacobus, stating that he had examined one of the patients operated upon by Dr. Polk, and found the uterus in as bad a position as it had occupied. Dr. Polk remarked that it was evident this was one of the cases reported in his paper, in which there had been adhesions and in which recontraction had taken place, and the final result had not been all that he had hoped for. Anyway, he did not claim that Alexander's operation would always prove successful; he only claimed that in the majority of cases it would accomplish what was expected of it.

NEW YORK PATHOLOGICAL SOCIETY.

A STATED meeting was held June 9, 1886, John C. Peters, M.D., Chairman *pro tem.*

CHRONIC SALPINGITIS AND CYSTIC OVARIES.

The specimens were presented by Dr. W. Gill Wylie for a candidate.

FATTY EMBOLISM IN THE LUNGS.

Dr. Frank Ferguson presented specimens for microscopical examination of fatty emboli of the lungs, found in the body of a man who had died after severe injuries sustained from a fall. The lungs appeared unusually anæmic, and the capillary vessels were completely occluded by the presence of fat. There were also fatty emboli in the kidneys. The specimens were cut fresh by Valentine's knife. Dr. Ferguson thought that if he were to devote all his time to microscopical work he should prefer in all cases fresh specimens. Although the sections were thicker, this objection disappeared after a little experience. Sections could be made from all organs in the fresh state except from the spleen.

A SERIES OF SPECIMENS FROM TAIT'S OPERATION.

Dr. W. Gill Wylie presented over a dozen specimens from a series of twenty-eight cases of Tait's operation performed during the last year, or since the last time he presented specimens from a series of twenty-five cases in which he had performed this operation. Specimens of this kind were no longer interesting because rare, for they were getting to be quite numerous. He presented them because they were good illustrations of pyosalpinx, and because he had made it a rule to preserve all of his specimens, in order to verify the needs of the operation in cases in which he performed it. Two of the twenty-eight patients died; the remainder recovered. In the two fatal cases there were severe complications. In fully one-half of the cases there was well-marked pyosalpinx in different stages. In many the tubes were distended with pus; while in many more they contained a coffee-colored, rather thin fluid, which was the result, he believed, of degeneration of the lining membrane with slight hemorrhages. In nearly all cases in which the end of the tube was stopped the ovaries were found cystic, and he was disposed to think that any disease which led to stopping up of the tubes would in a comparatively short time lead to cystic degeneration of the ovaries. By cystic degeneration he did not mean the formation of small cysts which some pathologists claimed were due to failure on the part of the corpus luteum to burst, but cysts the result of real degeneration. They varied in size from that of a pea up to that of an orange. Occasionally there was cystic degeneration without closure of the tube, but that was not so common. He believed that in true cystic degeneration of the ovaries without marked disease of the tubes there was almost always an hysterical condition.

Dr. Putnam Jacobi thought it strange that, in the report of his large experience, in not a single case had Charcot referred to disease of the ovaries as the cause of the hystero-epilepsy.

MEDULLARY CARCINOMA OF THE OVARY, WITH SECONDARY DEPOSITS.

Dr. E. M. Cushier presented specimens removed from the body of a German woman

aged 26 years, the mother of three children, who about four months prior to her death had noticed an enlargement of the abdomen. Her health previously had been good. The tumor was painful, was situated to the left of the median line. The patient had a cachectic appearance. Some days before death she had a convulsion, and afterwards remained in a state of partial stupor. Later there was external strabismus in the left eye, followed by dilatation of the pupil. The right eye appeared normal. There was albumen in the urine at the later examinations; none when the patient entered the infirmary.

The autopsy revealed a large tumor in the left side of the abdomen, but developed from the right ovary. The adhesions were firm and extensive. It had the microscopical appearances of a medullary carcinoma. There were two small nodules in the kidneys, one of considerable size in the liver, and the lungs were studded with small nodules. The brain showed changes which would be described by Dr. Putnam Jacobi. As far as Dr. Cushier's examination had extended, the appearances of a medullary cancer were present only in the ovarian tumor; but she desired a further examination of the several specimens to be made by the Committee on Microscopy.

CARCINOMATOUS TUMORS OF THE BRAIN—CEREBRAL HEMORRHAGE.

Dr. PUTNAM JACOBI presented the brain in the case just narrated by Dr. Cushier. The largest tumor was situated in the second and third convolutions of the left hemisphere. So far as was observable, however, the patient's speech had not been affected. There was also a small tumor in the anterior convolutions of the same hemisphere, and likewise one in the occipital region of the right hemisphere. The convulsion seemed not to have been due to the presence of these tumors, but to a hemorrhage in the right peduncle encroaching upon the caudate nucleus. She was unable to explain the eye-symptoms from the lesions found. It had been her impression that the albumen appeared in the urine only after the convulsion, and that it was not the cause of the convulsion.

Dr. CUSHIER was not positive that the house-physician had said the urine contained albumen before the convulsion or only afterwards.

Dr. AMIDON said the temporal lesion was situated where one would expect it to affect the speech, and the patient's tendency to be reticent might be accounted for in that way rather than on the supposition of stupidity. As Dr. Jacobi had said, the tumor appeared quite vascular.

LARGE DERMOID CYST OF THE OVARY.

Dr. E. N. LIELL presented a tumor, weighing with the fluid over sixty pounds, removed from a woman 69 years of age. The patient had borne three children; had ceased to menstruate twenty years ago. Her health had always been good until March last, when she noticed enlargement of the abdomen and had some pain. Her physician sent her to Dr. H. Marion Sims, who removed the large dermoid cyst from one ovary that afternoon. It was, of course, too early to say what would be the result of the operation. The tumor contained a grumous mass and two bones. Further examination will be made by the Committee on Microscopy.

A STATED meeting was held June 23, 1886, the President, JOHN A. WYETH, M.D., in the chair.

Dr. FREEBORN, of the Committee on Microscopy, made a report upon the specimen of enlarged bronchial glands presented at a recent meeting by Dr. J. Lewis Smith. After examining more than thirty specimens, he finally found a tubercle-bacillus.

In the portion of tumor of the brain presented at the last meeting by Dr. Putnam Jacobi, he had been unable to find any evidence of carcinomatous deposit.

The tumor presented at the last meeting by Dr. W. Gill Wylie, who thought it might be a calcified ovary, proved on section to be a dermoid cyst.

LARGE DOUBLE FIBROID TUMOR OF THE OVARY.

Dr. H. MARION SIMS presented a fibroid tumor between five and six pounds in weight, developed from the ovary, and removed three weeks ago from a woman 63 years of age. The patient had first noticed enlargement of the abdomen in March last. She made an excellent recovery from the operation. Besides being an unusually large fibroid tumor of the ovary, it was double, a condition which he had not before seen.

SPINDLE-CELLED SARCOMA OF THE BREAST.

Dr. BANG presented a tumor of the breast within which was a cyst which had contained about three tablespoonfuls of sanguineous fluid. Dr. Frank Ferguson had examined the tumor, and pronounced it a spindle-celled sarcoma. The patient, aged 30, healthy, married, but never having borne any children, first noticed a tumor the size of a hazelnut four years ago. Three and a half years ago it had attained to the size of a walnut. She then fell and sustained a severe blow on the breast, after which the tumor developed rapidly and involved nearly the whole gland. It was hard, but freely movable. There was one enlarged axillary gland about the size of a pea, which was not recognizable soon after the tumor from the breast had been removed. The patient made an excellent recovery.

The PRESIDENT said he had removed a

good many tumors from the breast, but he had never seen a spindle-celled sarcoma of that gland.

The Society adjourned until September.

REVIEWS AND BOOK NOTICES.

TRAITÉ ÉLÉMENTAIRE DE L'ANATOMIE MÉDICALE DU SYSTÈME NERVEUX. Par CH. FÉRÉ. Paris, 1886. Publications du *Progrès Medical.*

The medical relations of the different portions of the nervous system, at least the most important and best established of them, are set forth in this compendious treatise, which otherwise is a summary of the descriptive and topographical anatomy of the nervous system. A large number of diagrams and figures, both normal and pathological, serve to illustrate the text, which is clearly written and is based principally upon the works of Charcot, Nothnagel, and Erb. The work is a useful one for reference with regard to the anatomy of the nervous system, in both its central and peripheral portions, and the medical applications will be found to make it especially serviceable in explaining some of the difficult problems of neuro-pathology.

NEW REMEDIES AND CLINICAL NOTES.

TREATMENT OF EPILEPSY.—Dr. William Moore, of the New York City Hospital for Epileptics, offers some interesting remarks in regard to treatment (*St. Louis Courier of Medicine*). The cases recorded number forty males, divided into three classes according to etiology and period of development. The first class are surgical cases, four in number. Three of these were operated upon for depressed fracture of the skull; in two of these there was a marked decrease in attacks after operation, and one was permanently cured. In addition to operation, the patients were all under the course of treatment presently to be described. The second class includes cases where the attacks began after twenty years of age. Of these there were five. The cause in three was traced to intemperance; the etiology was obscure in the remaining two. The third class were congenital or occurring within two years after birth.

In the treatment of these cases a very important place is given to hygienic and dietetic management, and the removal of all exciting causes, the patients pursuing occupations most agreeable. With regard to diet, the time of eating the principal meal of the day and irregularity in the quantity and quality of food were all found to be in direct ratio to the number of attacks, and the correction of which proved the accuracy of the observation. Closely related to diet is constipation of the bowels, it being a notable cause of the excitation of attacks. The utmost regularity in this respect should be maintained. The temperature of sleeping-apartments should be kept low, about 64° F. A rise of ten degrees from this has been found to increase the number of paroxysms. The treatment, with the foregoing management, found most beneficial consists of a modification of the "Brown-Séquard mixture:"

℞ Potass. iodidi, ʒij;
Potass. bromidi, ℥j;
Ammonii bromidi, ʒiij;
Potass. bicarbonat., ʒj;
Tinct. calumbæ, ℥j;
Aquæ destil., ℥vj. M.

Sig.—Teaspoonful t. i. d., and three teaspoonfuls before the time when attacks usually take place. If these cannot be estimated, three teaspoonfuls should be given at bedtime.

The following are the statistics for three periods of six months each for genuine attacks:

First period: Total number of cases treated, 2485; average attacks per patient 62.2. Treatment here was nitrate of silver, oxide of zinc, bromides, etc., without attention to diet and bowels.

Second period: Cases, 2424; average per patient, 60.9. Treatment, bromides and opium, with attention to hygienic management.

Third period: Cases, 893; average per patient, 22.3. Treatment in third period consisted of rules and treatment above described strictly adhered to.

A SEVERE CASE OF DELIRIUM EBRIOSUM.—At a stated meeting of the Cincinnati Academy of Medicine, held May 18, Dr. E. G. Zinke reported the following case. A clerk in a shoe-store, æt. 33, had been addicted to the use of strong drink, especially whiskey, for ten years; had often been treated previously by the reporter for nervous attacks of a day or two in duration. When seen, he had been restless and without sleep for five days; temperature, 100°; pulse, 150, tremulous; appetite good; talkative and delirious. Prescribed

℞ Chloral hydrat., ʒij;
Potass. bromidi, ʒiv;
Codeinæ sulph., gr. ij;
Syr. simplicis,
Aq. dest., āā f℥iss. M.

Sig.—Tablespoonful every hour till sleep is produced.

He took all this without procuring sleep. Requiring stimulant, he was put on ounce-doses of whiskey with thirty drops of laudanum every three hours. Still no sleep. Delirium desperate. It required three or four

men to hold him upon the bed. Fearing the opium and chloral, he was put on thirty-grain doses of the bromide of potassium every two hours. He obtained no sleep, but grew worse. One-half grain morphia subcutaneously and the strait-jacket were found necessary; and, lastly, the administration of chloroform, which put him to sleep in about an hour. This, however, lasted but a short time. A season of comparative quiet followed, but was succeeded by more violence than ever. The patient's appetite being good and his bowels regular, it was determined to administer the chloroform again. In large quantities this had some effect, and the patient improved. He was then put on chloral, and did well. Manifest prostration supervening, he was given tablespoonful doses of wine of coca every four hours. From this time on recovery was uninterrupted.

The patient during the five days took the following amounts: bromide of potassium, one ounce; chloral, three drachms; morphine, three grains; laudanum, five drachms; chloroform, twenty ounces. This seems a large amount of drugs. Still the fact remains that he was little affected by them; and the reporter thought it required the combined effects of all of them to produce the desired result. He admitted he had used heroic treatment, but thought the case demanded it.

MISCELLANY.

Unwholesome Canned Peas.—The Health Board of Brooklyn has been looking into the healthfulness of French peas, and has condemned large quantities on account of injurious articles used in their preparation. The names of the brands which the Brooklyn authorities have decided to be unhealthy are the following: Henry Deler et Cie, Dandicolee et Gaudin, Bordeaux; J. Nouville, Bordeaux; Perry fils, A. Lazun, E. Estibal, Bordeaux; E. M. Daelzin, Bordeaux; D. M. Ausone, Bordeaux; L. Carpe et Cie, Lunéville; Soule et Prise, Bordeaux; F. Fitonaine, Bordeaux; John Moir & Son, London, Aberdeen, and Seville; Charles Julien, Paris; Barton fils, Fontaine Frères, Paris; G. Talbot, Bordeaux. These names are given, as it may be useful to know what particular brands are held to be unhealthful. Five hundred grocers in Brooklyn have been notified not to sell peas coming from these houses.

Medical Malpractice in China.—The Chinese penal code does not favor medical malpractice, as the following quotation will show. "Whenever an unskilful physician, in administering medicines or using the acupuncture needle, proceeds contrary to the established forms, and thereby causes the death of the patient, the magistrate shall call in other physicians to examine the medicines or the wound. If it appear that the injury done was unintentional, the practitioner shall then be treated according to the statute for accidental homicides, and shall not be allowed any longer to practise medicine. But if he have designedly departed from the established forms and have practised deceit in his attempts to cure the malady, in order to gain property, then, according to its amount, he shall be treated as a thief; and if death shall ensue from his malpractice, then for having used medicine with intent to kill he shall be beheaded."

Dangers of Sublimate Solutions in Obstetrics and Surgery.—The *Medical Record* (July 10) calls attention editorially to the necessity of observing proper caution in the use of corrosive sublimate dressings.

Dr. D. Bryson Delavan has been elected Professor of Laryngology in the New York Policlinic, as the successor of the late Dr. Elsberg.

The American Neurological Association held its annual meeting at Long Branch on the 21st, 22d, and 23d instant, holding morning and afternoon sessions.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 4, 1886, TO JULY 17, 1886.

Lieutenant-Colonel Charles Page, Surgeon.—Leave of absence further extended one month. S. O. 156, A. G. O., July 8, 1886.

Major Joseph R. Gibson, Surgeon.—Granted leave of absence for three months, to take effect about August 1. S. O. 158, A. G. O., July 10, 1886.

Major William E. Waters, Surgeon.—Ordered for duty as post-surgeon, Fort Spokane, Washington Territory. S. O. 112, Department of Columbia, July 2, 1886.

Captain Richards Barnett, Assistant-Surgeon.—Leave of absence extended six months on surgeon's certificate of disability. S. O. 162, A. G. O., July 15, 1886.

Captain Edwin F. Gardner, Assistant-Surgeon.—Granted leave of absence for two months. S. O. 158, A. G. O., July 10, 1886.

First-Lieutenant William O. Owen, Jr., Assistant-Surgeon.—Ordered for duty at Fort Schuyler, New York Harbor. S. O. 84, Division of the Atlantic, July 15, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM JULY 4, 1886, TO JULY 17, 1886.

A. R. Wentworth, Assistant-Surgeon.—Detached from the U.S.S. "Brooklyn," and wait orders.

Oliver D. Norton, Assistant-Surgeon.—Detached from the U.S.S. "Minnesota," and to the U.S.S. "Brooklyn."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDING JULY 17, 1886.

White, J. H., Assistant-Surgeon.—Granted leave of absence for thirty days, July 12, 1886.

Pettus, W. J., Assistant-Surgeon.—When relieved at Charleston, South Carolina, to proceed to Savannah Georgia, for temporary duty, July 9, 1886.

PHILADELPHIA, AUGUST 7, 1886.

ORIGINAL LECTURES.

CLINICAL LECTURE

ON THE EFFECTS OF CONTUSIONS AS INFLUENCED BY DIFFERENT CONSTITUTIONAL STATES OF THE WOUNDED.

BY PROFESSOR VERNEUIL.

Delivered at the Hôpital de la Pitié, Paris.

[Translated for the MEDICAL TIMES from advance sheets.]

IT is now several years since I published, for the first time, some examples showing that contusions produce diverse effects according to the different constitutional states of the wounded.*

Constitutional states modify in a manner, latent but certain, the solids and the fluids; and when accompanied by dyscrasia and dystrophy, they impair both the immediate and the remote prognosis of contusions. In infants, the resorption of effusions and the union of the walls of cavities take place often with great readiness; complications are rare, and the contused wounds themselves will heal easily, owing to the extreme activity of the organic functions. In elderly people, however, it is entirely different. Ecchymoses, for instance, are still visible after some weeks or even months; the life of the tissues with them is so precarious that slight pressure even is sufficient to cause inflammation, or lead to mortification of the skin, especially in regions remote from the heart. Weak adults, and those suffering with some cachexia, in this respect are like the aged. If diathetic patients are cachectics, inflammations destructive in character, with gangrene, are seen, because the extravasated liquid possesses irritating qualities, and because the tissues have only a feeble power of resistance. If, on the contrary, the organism is still sufficiently strong, there are no complications at the beginning, but the processes of repair languish and usually do not go on to completion. An undefined irritation persists at the site of the wound, and later, without any known cause, or from the slightest, morbid processes more or less grave are lighted up. In some it is a neoplasm, in others an osteitis or a cold abscess; a dry arthritis in one, a white swelling in another. The recognition of the diathetic state is just here so much the more important, since it enables us to foretell not only the deviations in the reparative processes, but also the kind of deviation which threatens this or that patient.

In children, contusions of the bones will produce more particularly acute inflammations, osteomyelitis, and suppurative periostitis, or, on the other hand, neoplasms, osteosarcoma, and myeloid tumors. If they are scrofulous, we may have rarefying osteitis, bone-abscesses, obstinate periostitis, and hyperostoses. A contusion of the breast in a young girl will cause an adenoma; in a woman of forty years, a carcinoma; in a wet-nurse, an abscess. Besides this, no matter what the sex or the region, we must be careful of glandular contusions, above all when they come on in mature age and do not disappear rapidly; because these persistent indurations and tumefactions are strongly suggestive of a malignant disease. In arthritics suppuration and gangrene are relatively rare, but neoplasms are to be feared. Tophi have been seen to develop in gouty patients just at the point of contusion. The *morbus coxæ senilis* has more than once appeared right after a fall on the hip in rheumatic people. In syphilitics contusion is often followed by an exostosis on the surface of superficial bones.

In the absence of clearly appreciable disease (often overlooked because we do not search carefully enough), certain symptoms consecutive to contusion owe their persistence or their intensity to some constitutional predisposition. We allude to rebellious neuralgias. Neuromata developing at the point of contusion have been assigned as a cause of this symptom; analogous to the neuralgia of amputated stumps. The anatomical fact is quite acceptable, but the conclusions drawn from it are less so when we reflect that all amputation-stumps have these neuromata, and that neuralgia of the stump is relatively rare. We have observed several cases of these neuralgias consecutive to contusions, and we have found in most of them a most manifest neuropathic state, which had existed previous to the injury. Almost all of them were arthritic, and the young women were some-

* Article "Contusions" in the *Dict. Encycl. des Sciences.*

times hysterical or else prospective gouty subjects. In support of the opinions that precede, we will now cite some very conclusive observations, showing the manner in which contusion acts in awakening the diathesis. The following case is a type of the kind which can be seen every day in practice:

Case I.—Fall upon the Knees of a Rheumatic Patient—New Attack of General Rheumatism.—Caroline T., 18 years of age, good constitution, and general health previously good, entered my service for the first time in September, 1878, for a rheumatic arthritis, mono-articular, of the right knee, the last vestige of a poly-articular rheumatism of puerperal origin occurring one month after confinement. The lesion was rather serious, the synovia being thickened, and a considerable hydrarthrosis existed. Treatment was by revulsives, and absolute immobilization with compression. The cure seemed well on its way in January, and she was sent for convalescence to Vésinet (a hospital out of town), and there remained six weeks, when she was apparently cured, except that some articular crackling was noticed when the member was stretched, and a slight weakness of the leg was shown after a long walk, with a little pain.

She returned to her work, and in March fell on her knees, when the right one again became red, swollen, and painful, and the next day she returned to the hospital. We took to the immobility again, and used electricity on the triceps muscle, as it was notably atrophied. This attack lasted twenty days, and she then asked to be received as an in-door infirmary nurse,—a profession which all know to be very fatiguing. All went well with her up to the 24th of May, when she had a renewed fall on her knees, and the same evening the right knee again became painful, and the day after fever lit up again, and the patient took her place in bed in our wards. On the 26th, I found her with the articulation swollen, red, and painful on the slightest pressure and the least movement. The left knee also became very sensitive. There was a moderate fever, with anorexia and gastric disorder. On the following days the rheumatism generalized itself, and successively invaded the two wrists and the left shoulder. We prescribed vapor-baths and salicylate of sodium; the last was not well tolerated, and we replaced it with sulphate of quinine. By the 10th of June the attack was nearly over; the right knee, which had been affected the first, remained painful the latest; on the 15th she went on with her work as nurse. If we consider puerperal rheumatism as infectious or microbian, the preceding case compels us to admit that the articulation first taken with the malady remained inhabited by the microbe, which, on an occasion of a direct determining cause, such as cold or contusion, redeveloped; even when the contusion involved a different part of the economy, as another joint, for instance. If, in a relapse of the malady, it invaded an articulation which had not been attacked in the first appearance of the disease, we must further admit that this articulation had received the microbe in a latent state, or that it had got it by recent colonization or emanation from the focus from which the new outbreak started. These hypotheses seem to be a little subtile, if not singular, but we must use them if we wish to explain the reappearance, which is otherwise incontestable, of propathies provoked by traumatism.

On Contusion in Subjects that are Convalescing from Infectious Diseases, etc.—Accident has just placed before my eyes two instances which should be associated with the preceding,—first, because in the two cases a slight contusion was followed by the formation of pus in the wounded point; and, second, because in each the existence of a previous malady was noted, with this difference, however, that the present observations relate to acute diseases that seemed completely cured, and in them the connection with the development of abscess might easily have been overlooked. It is by analogy that I admit the connection, relying on the law that a slight interstitial wound in a subject free from all defect ought not to suppurate.

Case II.—Slight Contusion at the End of a Convalescence from Typhoid Fever—Abscess with Slow Development.—Mrs. X., 69 years old, having always had excellent health, and still presenting all appearance of it, entered my service for a tumor situated to the left of the sternum, on a level with the cartilage of the third rib. It was about as large as the half of an apple, regular, and circumscribed by a projecting border. There was no change in the color of the skin, and it was soft and fluctuating, almost indolent, on pressure. This tumor

offered all the characters of a cold abscess or a chronic suppurating periostitis. The etiology and pathogenesis constituted the interesting points, and I will say at once that I made an incision, which gave issue to pus that was thick and without odor; and a cure followed in about ten days later, without any notable accident.

Asked as to the origin of the abscess and its development, Mrs. X. gave me the following information. Living in the country in a healthy locality, she came ten months ago to Paris to see her daughter, and contracted a typhoid fever, which made its appearance on her return, followed by a convalescence which was prolonged for three months, but which was not characterized by anything especial except weakness. Towards the end of this convalescence she accidentally struck the end of a long loaf of bread against her breast at the point where the abscess came on later. The pain at first was slight, and went away in two days, but came back at the end of a month, less marked, but now constant, and always awakened by the touch. Some weeks afterwards a tumefaction came on, that was at first profound and seemed connected with the bones. A doctor who was consulted gave iodine frictions and iodide of potassium, but without any benefit. The tumor continued until she came to me. I am sorry I did not have the pus examined to see if the pyogenic microbe was present in it; but in any case the fact is not the less interesting. We know that deep abscesses that may be periosseous, or even sub-periosteal, are not rare in the course of a typhoid fever, but I do not know of any instance of an abscess coming on after the cessation of the fever, and of which a contusion was definitely the determining cause. I owe to one of my *confrères*, a distinguished doctor of Paris, an observation that is comparable to this one, with this exception, that the child affected was recovering from the measles, of which he seemed cured. It was a little boy of seven, of good constitution, tall and strong for his age, and in January, 1884, he was attacked with measles. His convalescence was slow. On the 13th of March he had not yet taken on his usual good appearance, when he struck himself rather violently in the submaxillary region on the right side near the sterno-mastoid muscle. Some days afterwards a phlegmon developed itself that started from this point as a centre, and invaded all the neck and cheek on that side, with a considerable swelling of all the region. The pus was a long time developing, and it was not until the 2d of April that the fluctuations became clear enough to permit an incision to be made, when a large teaspoonful of pus came away that was yellow in color, but inodorous, and examined with the microscope it did not present any bacteria. Suppuration was moderate, and the cure was completed by the 20th of April.

On Contusion in Phthisical Patients.—Certain cold abscesses which come in tuberculous patients have an origin that is quite analogous to the preceding cases. It seems that contusion provokes, as it does in some syphilitics, the formation of a gumma of a tuberculous nature similar to the gummata of syphilis; and sometimes quite rapidly, taking upon itself characters usually considered peculiar to warm abscesses. The following is an example of such a case:

Case III.—Slight Contusion in a Phthisical Patient—Suppuration at the Point of Injury.—B., 37 years of age, entered the 17th of April, 1880, for a contusion of the internal face of the forearm of three days' date and resulting from a shock against a hard body. The skin was not broken, nor were there any ecchymoses or blood-lumps, nevertheless an inflammation of a phlegmonous and circumscribed character developed rapidly at the point of contusion, and it was accompanied by fever with malaise. The day after he came in, then a little more than four days since his accident, we noticed the existence of a collection of about the size of a nut, and an incision of two centimetres was made. Local relief was prompt, but the general trouble persisted, as well as the fever. The thermometer was 39° that night, and the day after it was 40° (centigrade). Examination of the chest showed him to be consumptive, and explained his symptoms. The preceding week he had had two attacks of hæmoptysis, and percussion with auscultation revealed at the apex of the right lung unequivocal signs of advanced phthisis. On the left side the lesion was not so marked. At the superior limit of the right lobe and the middle lobe we could hear subcrepitant râles and a slight souffle that clearly indicated the existence of a zone of pneumonia around the tuberculous focus at the summit: so that in this

way all the symptoms were explained of which the abscess on the arm could not give us an account. The pneumonia was not of great extent, and treated with revulsives (a purgative and the white oxide of antimony) it slowly gave way, and the patient was back to his usual state in about three weeks. This fact is instructive in a double point of view. First, it confirms the rule in virtue of which rapid suppuration of an interstitial wound, without gravity, has almost always for its cause the existence of some general disease anterior to it; and also the other rule that scrofula and tuberculosis are among the general morbid states that most favor these abnormal suppurations. Second, it equally shows that a wound, in itself insignificant, which intervenes in the course of a visceral affection, during its progress (which was indicated here by the recent hæmoptysis) can accelerate the development of that affection or even sensibly aggravate it.

The effects of contusion are still more remarkable in the following observation:

Case IV.—Contusion in a Scrofulous Patient—Development of Multiple Tuberculous Manifestations—Integrity of the Lungs—Death.—In 1882, bed No. 1 of Lefranc ward of the Hôpital de la Pitié held a young woman 24 years of age, who was pale, weakly, and thin. She was covered from head to foot with scrofulous lesions; the neck was furrowed with cicatrices and fistulas, as well as the right breast and the thorax near by. There were also several of these collections on the left forearm on a level with the ulna, and the left knee was the seat of a considerable tumefaction offering all the characters of a tuberculous osteo-arthritis of a grave form. It was for this last lesion that she entered the hospital. The interest of this case resides above all in the genesis of the symptoms. Attacked in early childhood by a benign eruption of impetigo, she was fairly well up to the age of seven, when she received a violent blow on the lower jaw. An abscess developed at the point of contusion, then the lymphatic ganglions of the neck inflamed one after another and suppurated, becoming fistulous. Little by little she got better, and her youth passed away without any particular derangement of health. At twenty she had married, and had a first child the following year. She did not nurse it, and her health was quickly re-established. At twenty-three she had a second child, and nursed it for several months, from which resulted a considerable loss of flesh and great weakness; then without any known cause the cicatrices of the neck opened, and new collections formed. At the same time the right breast received a slight contusion and formed several abscesses, which opened and presented the appearance of tuberculous ulcerations. A little while afterwards she entered the hospital in the lamentable state described above. It is a remarkable fact that with all the appearances of an advanced cachexia, with an abundant suppuration and sharp pains in the tibio-femoral articulation, we were able to say that the internal organs were intact. Lungs, liver, kidneys, all were in an apparent healthy state. There was only an evening fever and sensible diminution in the appetite. She asked to have an amputation of the thigh performed, but in her poor condition I did not wish to do the operation, but intended to later: so a local and general treatment was instituted. Antiseptic dressings modified the wounds and stopped the hectic fever. A wadded apparatus immobilizing the knee calmed the pains, so that in a month she was much better, and this would have been the moment to have performed the amputation, but she now refused the operation. A purulent collection of enormous size formed in the thigh, and at the end of two months she died, the lungs remaining sound to the last, which made us regret that the amputation had been refused.

The influence of contusion here in provoking disease appears in the clearest manner,—at the beginning in lighting up the first manifestations of tubercle in a little girl who had no other antecedents than a slight impetigo when a child, then in calling forth a second series of lesions in an organ evidently predisposed to suppuration, but as a rule most rebellious to invasion by tubercle. What is important to notice here is not only that the contusions revealed the diathesis and brought about the specific deposits at the points that were injured, but that they also seemed to have provoked the formation of focuses that occupied a considerable extent, just as if there had taken place from the point of injury a dispersion or a propagation of the pathogenic germs.

It was in this way that the contusion of the jaw brought about the abscesses of the

neck; and the contusion of the breast was followed very quickly by the formation of mammary abscesses and purulent collections in the forearm, and an arthropathy of the knee-joint. The migration of the microbes that took place from the thoracic region to the superior and also to the inferior member could just as well have affected the viscera and caused a tubercular granulation there, or a meningitis. This seems so simple that I cannot understand why some surgeons still refuse to admit these facts showing a tubercular dissemination after accidental or surgical traumatism. Fortunately, their number diminishes every day, so that before another ten years all resistance to these simple and useful ideas will have ceased.

I can associate with the above another observation similar to it, as here again a contusion of the hip in a phthisical patient provoked the development of an acute tubercular coxalgia, and pulmonary lesions of the same nature which caused death in less than three months. At the same time that this patient was in my hospital wards, two others occupied beds there who were also suffering with contusions of the hip: they were all about the same age, but had different constitutions, so that these three patients show in a most positive manner how the consequences of the same lesion can vary according to the morbid predispositions of the wounded. In the second case (a young man robust but predisposed to rheumatism), a fall on the trochanter major brought on an acute coxalgia, which was treated with an energetic antiphlogistic method which, combined with immobility in Bonnet's apparatus, led to a rapid cure. The third patient was a girl of hysterical temperament; she met with the same accident, that is to say, a fall on the trochanter major, and it led in her case to a contraction of the peri-trochanterian muscles and an extreme deformity of the hip, which had lasted for nine months before I saw her. Anæsthesia with chloroform stopped the contraction, and it allowed me to straighten out the member at once. She was then put in the immovable form (Bonnet's), and in a few days she was cured.

I have observed the same phenomenon of contraction in a case of peri-articular contusion of the elbow in a young man. The superior member was so firmly fixed in extension that I thought it was a case of anchylosis. This was a month after the accident; but after chloroform was given it was easy to move the articulation, and a few days of repose with a wadded bandage brought about a cure. These contractions following an articular contusion are important to recognize, for they may cause false anchylosis (and generally with the joint at a bad angle), which can be easily cured with chloroform and a few quick manipulations. This is why, when the anatomical causes of an anchylosis do not seem evident, I propose always to defer making my diagnosis until after an exploration with the aid of chloroform and attempt at passive motion have been made.

On Contusion as a Determining Cause of Neoplasms.—We all know how much the question of the *rôle* of contusion has been discussed in the development of cancer and tumors in general. For my part, I have always admitted this cause not only for the malignant new-growths, but also for the most benign, such as cysts, lipoma, etc. One of my internes, M. Le Clerc, has, under my directions, accumulated a quantity of material, and has prepared a thesis giving the actual state of our knowledge upon this subject. The following are the conclusions reached in his thesis. 1st. Contusion has an undeniable *rôle* in the etiology of neoplasms. 2d. It acts by exaggerating the reparative process going on in the centre of the tissues, and by creating in the wounded part a *locus minoris resistantiæ*. 3d. It is, however, only a localized cause, and cannot produce by itself a neoplasm; to do so it needs a diathesis that we will call neoplastic, which is secondary, and depends upon arthritism.

I see these cases every day in practice. Here is one which I wish to cite as giving proof of an action provoked by a traumatism, and which caused a tumor to appear at the point of the contusion that would not have appeared spontaneously until at least two years later:

Case V.—Polycystic Adenoma of Both Breasts, developed on one side from a contusion, and twenty months afterwards on the other side spontaneously.—Pauline P., 52 years of age, servant, small in size, rather stout, and having always had perfect health, was entered at La Pitié on the 28th of October, 1878, for a double tumor of the mammary glands. She gave the following account of her malady. In 1876, some weeks before the cessation of her menses,

she struck her right breast in this way: she was breaking a stick across her knee, and it gave way suddenly, striking her violently on the upper part of the breast. A month later there appeared at this point a hard painless nodule, which gradually increased, until when she came into the hospital it occupied all the gland with nodosities of a conglomerated character, without, however, augmenting its volume or changing its form. It did not alter the structure nor change the color of the skin, neither did it adhere to it. The left breast was also invaded by the same lesion, though less advanced: it had become affected only four months before, without any known cause. In the axilla the glands were enlarged and a lymphatic cord was found attached to the tumor; it was now sensitive, and the seat of frequent lancinating pains. It presented the same character on both sides, except that one had advanced more rapidly than the other. I diagnosticated a polycystic adenoma, an affection that is, as a rule, bilateral, as M. Réclus has so well shown. It appeared first in the right breast at the point of contusion; it would have no doubt attacked the left just as well had it been the site of the contusion.

ORIGINAL COMMUNICATIONS.

WEIGERT ON COAGULATION-NECROSIS.

(Abstract from the Original.)

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IN a series of elaborate articles in the *Deutsche Medicinische Wochenschrift* (October 29 and November 5, 12, and 19, 1885), Weigert gives the following interesting account of the present state of our knowledge on this important subject, and defines more clearly than he has hitherto done his views upon the matter.

I.—GENERAL CHARACTERISTICS OF COAGULATION-NECROSIS.

In coagulation-necrosis—*i.e.*, in that metamorphosis by which the tissue or its constituents become changed into a dead, coagulated mass—it is easy to recognize that the cellular elements are actually dead. They have become incapable of life, and then either are absorbed or form an inert mass, which becomes encapsuled or else penetrated by the growth of the adjoining tissue. But, in order that we may employ the term, the mass must not only be dead, but *coagulated*. The fluid or semi-fluid albuminous bodies contained in the tissue must have been transformed into a solid substance. The evidences that this change has taken place are principally macroscopic. The product in question presents to the naked eye so great a resemblance to the two spontaneously-coagulated substances with which we are most familiar — fibrin and cheese — that for a long time we have employed the term "fibrinous" or "cheesy metamorphosis." But microscopically it differs greatly from fibrin. We see no thready or granular coagulum, but only the tissue-elements; which, however, must *in themselves* be so changed that the reason for the peculiar macroscopic appearance becomes comprehensible.

This condensation of tissue seems to have been prevented in those cases where we find crumb-like fragments floating in a fluid. In this case the fragments constitute, of course, the coagulated substance. We find a similar condition developing often in genuine fibrinous coagula,—as, for example, in softened thrombi. A still more familiar instance is to be observed in curds floating in the whey of curdled milk.

There is still another form of coagulation of tissue, wherein the solidifying albuminous material acquires a transparent "hyaline" appearance. Macroscopically this is seldom characteristic unless of great extent, but under the microscope it can be recognized by the peculiar hyaline brightness.

Still other cases of coagulation-necrosis occur in which there is no fibrinous or caseous metamorphosis visible to the naked eye. In such cases we conclude that those cells which are altered in appearance under the microscope are not only *dead*, but *coagulated*, if the same causes have been active which in other instances would have produced a macroscopic caseous or fibrinous change. For example, if a permanent obstruction occur in a renal artery an infarct is produced, giving the macroscopic appearances of coagulation-necrosis. If, however, the obstruction was but temporary, no pathological change can be seen by the unaided vision, but the epithelial cells are observed

under the microscope to be necrotic, and it is but just to infer that they are also coagulated.

II.—THE LOSS OF THE NUCLEUS IN TISSUES UNDERGOING COAGULATION-NECROSIS.

The individual cell-element in the coagulated condition shows at first but little change, except when the hyaline appearance is developed. After twelve to twenty-four hours, however, a very striking phenomenon is to be observed,—namely, the disappearance of the nucleus. This is an invariable occurrence, except in those cases where only that part of the cell is affected which does not contain the nucleus.

On the presence of the nucleus depends the power of the cell to grow and multiply,—as Kölliker has shown,—and its disappearance indicates the death of the cell. It is well known that certain cells, as the red blood-corpuscles and the cells of the horny epithelium, are normally without nuclei. But the uniform disappearance of the nucleus in the case of other fixed cells had been overlooked, except in a few instances, until Weigert showed its relation to the cell's death. Although all cells which undergo coagulation-necrosis lose their nuclei, yet it does not follow that those which have lost their nuclei must necessarily have suffered this change, as cells in gangrene and in certain other conditions are often without nuclei.

III.—OTHER VIEWS REGARDING THE EXISTENCE OF THE METAMORPHOSIS DESIGNATED "COAGULATION-NECROSIS."

Some writers have endeavored to explain the peculiar appearance as seen in renal infarct by supposing fibrin from the blood to be actually present. Others claimed that a simple necrosis had taken place. But a portion of kidney which has simply died is of quite a different character from an infarct. Virchow, in 1865, advanced the view that the remarkable consolidation observed is due not to coagulation, but to the abstraction of water. He bases his argument on two statements.

First, that dead animal matter behaves in a manner exactly analogous to the tissue of a plant which has died,—*i.e.*, it loses its watery elements. He claims, indeed, that it is not in a condition to retain the water entering into its constitution.

Second, that cheesy masses occasionally separate from pus after it has stood for some time, and that these clearly are evidences of a condensation due to loss of water; also that under the microscope certain shrunken cells are to be found, which constitute another proof of the abstraction of water.

Weigert, however, considers Virchow's deductions not correctly drawn. There is no reason, he says, why water should be abstracted from a part dying within and surrounded by the moist tissues of the body. We should rather expect it to remain moist or to become even softer, as indeed occurs, following the death of portions of the central nervous system. Moreover, the dry aspect of caseous masses is only apparent. This applies to many coagulated substances: a boiled egg, for instance, looks dryer than a raw one, although no loss of water has taken place. As regards the pus above referred to, Weigert claims that it is no ordinary purulent matter, but arises from processes wherein cheesy metamorphosis has already taken place, and that this apparently condensed pus really consists of the cheesy matter previously formed. It is certain, too, that by condensing pus in a vacuum over sulphuric acid we obtain a substance resembling condensed milk, with a leathery skin on the surface, but bearing no likeness whatever to cheese. The shrunken pus-cells also cannot be considered as a proof that any abstraction of water has occurred.

Weigert's belief that the cheesy masses are not due to this supposed loss of water, but to a coagulation-necrosis, is upheld by other facts: thus, in caseous pneumonia and in the similar degeneration of lymphatic glands there is macroscopically no shrinkage to be seen, as would be the case if the condition was produced by the abstraction of water; and if we examine under the microscope *fresh* specimens of cheesy metamorphosis which have not been treated with alcohol, we can distinguish easily the individual cell-elements, and can recognize that no shrinkage whatever has taken place.

IV.—CONDITIONS NECESSARY TO THE COAGULATION OF TISSUE.

There are four essential elements which must co-operate to produce tissue-coagulation.

1. *The part must die.* This must necessarily occur before coagulation can take place, if we adopt the theory of Schmidt.

2. *The tissues must contain substances capable of coagulation.* This coagulable material is present in all protoplasm of the body, except that of the central nervous system, in which, as before stated, we find softening following necrosis, instead of the occurrence of coagulation. Virchow also has remarked this isolated position of nervous tissue, and attributes the softening to the inability of the parts to lose their water, owing to their being enclosed in a bony capsule. But Weigert states very pertinently that, whereas in cerebral embolism softening occurs, in solitary tubercle of the brain we have cheesy metamorphosis taking place.

3. *Plasmatic fluid (as blood or lymph) in great excess must flow through the dead tissue.* In harmony with the theory of Schmidt, we believed that the fibrinogen of the fluid was thus brought into connection with the fibrinoplastic matter of the cells, and the coagulation effected.

More recently, Rauschenbach, of Dorpat, has claimed that, besides containing fibrinogen, the blood-plasma exerts a peculiar chemical action upon protoplasm, and has demonstrated this upon dead tissue outside of the body.

The coagulating element of the plasma becomes rapidly exhausted, hence the fluid must be in excess,—*i.e.*, it must *flow through* the mass. A simple saturation of the tissue is not sufficient, otherwise we would expect to find all the coagulable parts of the body becoming cheesy after somatic death. So also a fœtus dying within the uterus does not undergo cheesy degeneration, but macerates.

After somatic death there does occur, it is true, a sort of coagulation, as exemplified in cadaveric rigidity. But this differs essentially from coagulation-necrosis, in that it rapidly disappears and the cell-nuclei are not destroyed.

A quantity of plasma sufficiently large to produce coagulation-necrosis can only be supplied within the living body, where the dead portion is in uninterrupted connection, if possible on all sides, with living tissue in which the blood is circulating. By this means fresh plasma can be continually supplied, and that which is exhausted removed. This condition is fulfilled when a part dies *within* the living tissues, as in renal infarct or in an encysted fœtus of extra-uterine pregnancy. Superficial portions of the body only exceptionally become cheesy, since the requisite continual supply of fresh plasma cannot often be brought about.

The influence of the fluid thus flowing through dead masses may be further observed in the resorption of soluble substances contained in the latter. This is well seen in infarct of the spleen, even when no actual hemorrhage takes place. Although there are no pervious blood-vessels in the dead tissue, yet the red infarct first becomes livid from the diffusion of blood-pigment into it, and afterwards paler from reabsorption, even before a migration of white blood-cells into it occurs. This reabsorption is effected by the permeation of the fluid, and this latter is rendered possible by the intercommunication of the interstitial spaces of the living and dead portions. The phenomenon of the disappearance of the nucleus also depends on this "flowing through" of the plasmatic fluid.

The dead cells of a portion of tissue simply lying in this fluid, or remaining in some cavity of the body which contains plasma, do not lose their nuclei for a longer time, if at all. Baumgarten has confirmed this observation of Weigert's made years ago, and found, on introducing a portion of kidney into the peritoneal cavity, that the cell-nuclei remain unaffected. It is only when the tissue is very porous,—as in lung,—or the portion very thin, or when it becomes penetrated by newly-developing tissue, that the nuclei disappear.

Outside of the body this permeation with fluid cannot be effected, and the disappearance of the nucleus can only exceptionally be accomplished.

But by thoroughly mixing semen with a large excess of plasma, Rauschenbach found that the heads of the spermatozoids (*i.e.*, the nuclei) disappear.

The loss of the nucleus is, however, not dependent upon coagulation-necrosis. As already alluded to, Senftleben has shown that portions of lung hardened in alcohol (and certainly, therefore, fully coagulated) lose their nuclei when introduced into the abdominal cavity. Hence the disappearance of the nucleus in coagulation-necrosis is not caused by the coagulation, but is a coeffect with it of the flowing through of the plasmatic fluid.

Its occurrence, however,—apart from the physiological absence of the nucleus in red blood-corpuscles and in horny cells,—is not

only a very valuable sign that the permeation has taken place, but is also in addition a strong indication that coagulation-necrosis of the cellular elements has been effected.

4. *Influences capable of hindering coagulation must not be present.* Such, for example, are the poison of purulent matter, products of putrefaction, certain chemical substances, and layers of living epithelial cells between the dead masses and the plasmatic fluid.

V.—COMBINATION OF THE COAGULATION-NECROSIS WITH OTHER METAMORPHOSES.

With the factors producing coagulation-necrosis others may co-operate, which, without hindering the process, may influence its kind and form.

For example, a partial fatty degeneration of the cells may accompany or, oftener, precede it.

As is well known, fatty degeneration is produced in living cells by a deficient supply of oxygen leading to a gradual injury of the cell-protoplasm. If this condition was present before the actual death and coagulation of the cell, we find the coagulated masses mixed with fat-globules, and, if the fatty degeneration was extreme, the mass will possess a softer quality than ordinary. It is a question still unanswered, whether subsequent fatty degeneration can take place in the coagulated substratum.

Again, the form of the coagulated cells may be altered by the formation of vacuoles in them previous to their death. This is especially the case in epithelial elements.

Especially do we find forms varying from the typical coagulation-necrotic form when the cells were broken up in the surrounding fluid before actual coagulation took place. The fibrin masses which Rauschenbach thus produced in his experiments in cells outside of the body of course differ greatly from the necrotic masses arising within the body, and entirely resemble ordinary fibrin.

This brings us to the consideration of the next division of the subject.

VI.—THE RELATION OF COAGULATION-NECROSIS TO THE FORMATION OF TRUE FIBRIN.

Alexander Schmidt has shown that fibrin arises on the one hand from the white blood-cells, and on the other from the fluid of the blood. For its production it is necessary that the corpuscles should die, and thus at the same time produce the necessary ferment and set free the fibrino-plastic substance which, with the fibrinogen dissolved in the blood-fluid, renders the coagulation of fibrin possible. In later times the theory has been modified, and even in certain respects opposed, by the discovery of the third formed element of the blood,—the "blood-plates" of Bizzozero. The relation of these bodies to coagulation is still a much-disputed point, as is, indeed, the question concerning their true nature.

So far as regards the subject of coagulation-necrosis of tissue, Schmidt's pupils have shown that the white blood-cells are sufficient to account for the formation of fibrin. Indeed, Weigert has proved by experiments outside of the body that even other cells may, under altered conditions, give rise to its production. Whether, then, besides the cellular elements, the blood-plates possess the same power, and whether these bodies arise in a manner peculiar to themselves or result from the breaking up of the "vermicles" of Gaule or of certain white blood-corpuscles, are questions on which we cannot enter here.

Even if we adopt the most extreme of the various views,—*i.e.*, that the blood-plates are independent bodies, and that they produce one of the substances necessary not only for the development of thrombi but for the formation of fibrin in general,—yet the question of the relation of coagulation-necrosis to the clotting of blood is not affected, since through the investigations referred to it has been proved that coagulation *can* take place without their agency. Now, it is certain that, besides the fibrinogen, material necessary for the production of fibrin, and which is derived from the blood-plates (or in some cases also from the leucocytes), may occur already dissolved or suspended in the living blood-plasma; and in such cases fibrin is formed when the dissolved substances are precipitated. But when the material is contained in cells (with the exception, in certain cases, of the leucocytes) coagulation can only be produced in the presence of plasma outside of the body, when the cells are either mechanically or chemically broken up; and Rauschenbach has proved by experiment that fibrin can be generated in this way, in which case it is thready and granular and exhibits no trace of cell-structure.

Different still is it when the cells are not destroyed and the coagulable matter remains in them; then, on account of the easy exhaustion of the fibrinogen, a requisite amount can only be obtained when the old and depleted plasma is continually removed and fresh constantly penetrates into the cell,—that is, when the plasma *flows through* the cell. In this case the coagulation takes place within the cell itself, and the form of the tissue is preserved, although the cells are changed into coagulated masses without nuclei.

A final and satisfactory solution of the question how far the leucocytes share in the ordinary coagulation of blood can only be obtained by continued experimentation. Observations in pathology certainly tend to prove that they have at least some agency in the production of ordinary fibrin. This is well exemplified in the nature of pathological effusions. Exudations—*i.e.*, inflammatory effusions rich in leucocytes—contain much fibrin, while transudations—*i.e.*, effusions poor in leucocytes—have but little fibrin.

It is a further proof of the theory of Schmidt, that transitional forms exist between the true coagulation-necrosis of white blood-cells and ordinary fibrin. There exists, in fact, a true coagulation-necrosis of leucocytes. This is to be seen in cheesy masses, inflammation of serous membranes, thrombi, and pseudo-diphtheritis of the throat and palate. Weigert says that years ago he explained the nature of the shining flakes seen in this affection, in that masses of leucocytes coming out of the mucous membrane were heaped upon its surface and here underwent coagulation-necrosis. He was obliged to assume a special anatomical structure to permit of this view, and in later years this condition has been proved to exist. Now, situated between these flakes and the ordinary fibrin in the trachea there are transitional forms in the shape of strands.

Fibrin-product and coagulation-necrosis are, at any rate, very closely connected. Both owe their origin to "the action of plasma on dead protoplasm" (Rauschenbach). In the first case the material derived from the protoplasm may arise either from degenerated blood-plates or from broken-up cells. In principle it is the same.

The conception of the production of coagulation-necrosis will be somewhat different for those who do not accept the views of Schmidt,—for those, namely, who believe that the component parts of fibrin are always to be found together in solution in the fluid, and need, at most, but the influence of the ferment to be precipitated. Since they must admit that within living tissue no precipitation of fibrin takes place, they are obliged to make the supposition that in coagulation-necrosis the substances already dissolved in the plasma must be *deposited in the dead cell* and there coagulated, and that no elements to produce this effect are derived from the cell itself.

The propositions before stated regarding the production of coagulation-necrosis hold good under this theory as well. The same permeation of the cell with plasmatic fluid must occur; and whether but one or whether several of the components of fibrin must be supplied from without the cell, the conception of the result as coagulation-necrosis is not in any way altered.

VII.—FURTHER CHANGES IN COAGULATION-NECROTIC AND IN FIBRINOUS MASSES: CALCIFICATION; SOFTENING; HYALINE FORMATION AND RECASTING (UMPRAEGUNG).

It is a very strong indication of the affinity of coagulation-necrotic and of fibrinous substances that they may undergo the same additional metamorphoses.

1. *Calcification.* There is a marked tendency in both materials towards a subsequent impregnation with lime-salts. The rapidity with which this is brought about varies considerably. In some animals (herbivora) it is accomplished much more rapidly than in man.

Not only can all coagulated masses become calcareous, but it would be safe to say that every pathological calcification (not calcareous metastasis) must have been preceded by a coagulation-necrotic, or more generally a fibrinous, stage.

For example, we see calcification in thrombi, fibrinous inflammation, infarcts, foci of atheroma, cheesy masses of tuberculosis; also in isolated dead cells, as in the renal epithelium in certain cases, and in ganglion-cells.

2. *Softening.* This is another termination of both metamorphoses. We have already seen that the crumb-like decomposition of coagulated masses can be produced by an advanced fatty degeneration which preceded the coagulation.

Softening may, however, be produced under other conditions, as in pure fibrinous

masses which were from the first of somewhat looser consistence. In many cases the origin of the softening is to be found in the secondary solution of albuminous matter, caused by the presence of micro-organisms,—as in pyæmic thrombi. In other cases the reason of the change is still unknown.

3. *The production of hyaline matter.* Still another secondary alteration, occurring both in ordinary fibrin and in coagulation-necrotic masses, consists in their transformation into transparent, homogeneous, strongly-refractive hyaline masses.

Recklinghausen considers hyaline to be a distinct material, of which all but the microscopical characteristics are still unknown. Although Weigert does not believe that all which Recklinghausen has described under this title is to be classified with coagulated matter, yet he is of the opinion that typical hyaline forms like "*kanalisirte*" fibrin and the products of pseudo-diphtheritis represent derivatives of coagulated substances, not independent degeneration. None of the characteristics of hyaline, as given by Recklinghausen, oppose this view. This writer states its chemical peculiarities to be that it is not soluble in ammonium hydrate or in acids, and in this that it differs from ordinary fibrin. But the solubility of the material called "fibrin," from an anatomical point of view, is not at all always the same. It depends largely on its degree of solidity, and on chemical variations in it produced by the admixture of other ingredients. Thus, some forms become redissolved even in the fluids of the body (transitional fibrin), and others (true fibrin) are soluble with much greater difficulty, so that it would be no wonder if under the still further chemical action of the fluids of the body the conditions of solubility became still further altered. Recklinghausen himself appears to lay but little stress upon the differences in solubility, and, moreover, includes under "hyaline" many substances which behave quite differently with the same reagents. Among these he classifies amyloid matter, which both chemically and in the presence of dyes is to be distinguished from it.

A second set of peculiarities, he says, consists in its behavior with staining-fluids, —namely, that the acid-dyes (carmine, picro-carmine, eosin, acid-fuchsin), and in a less degree hæmatoxylin, stain it very intensely. But carmine, picro-carmine, and hæmatoxylin are very unreliable, except for nuclear staining, and eosin and acid-fuchsin stain a great variety of substances very deeply. Indeed, coagulation-necrotic masses, as seen in infarcts, etc., have such a disposition to be colored by the latter two dyes that the tinctorial reaction of hyaline, if it has any value as a characteristic, would indicate the close relationship of the two substances.

Still, it might be possible to discover a sufficient ground of difference between fibrin and hyaline matter in the way of origin of the latter. Recklinghausen states that for the production of hyaline matter the presence of numerous cells with abundant protoplasmic contents is necessary. These cells absorb the albuminous substances which were in solution in the blood, then lose their nuclei and granular appearance, and, indeed, their individual forms, and become "welded together." This explanation, Weigert says, corresponds almost exactly with the one for the occurrence of coagulation-necrotic hyaline formation given by him in a previous article.

If, then, no argument obtains against the classification of hyaline formation among the coagulations, let us next consider some which are quite decisive in its favor.

In coagulation outside of the body, we find in the same substance sometimes a hyaline, sometimes a granular, material developing. Many varieties of cheese, for example, are opaque, while some, as the genuine "Schweizerkäse," are hyaline. So also in the case of blood. By heating it in the usual way, the albuminous matter is deposited in flocculent, opaque masses. But a method may be followed (that of Koch) by which the coagulum becomes exquisitely hyaline.

How is it, now, within the body? The following reasons may be advanced which show that coagulated substances—ordinary fibrinous as well as coagulation-necrotic—stand in a very close genetic relation to hyaline.

A. It can be proved that fibrin becomes hyaline in a later stage. That this may really take place is shown by the fact that whereas under ordinary circumstances fibrin is wont to be found, under especial conditions hyaline is produced. One part of a mass, indeed, may frequently consist

of true fibrin and another of hyaline matter. In fibrinous inflammation of serous membranes, too, the deposited matter often becomes wholly or partially hyaline. Those cases in which the deeper layers of the coagulated matter are hyaline and the superficial ones ordinary fibrinous are strongly indicative that a transformation has taken place. Instances of this are to be found in large aneurisms, in endocarditis, and in thrombi.

B. In the so-called diphtheritis of the fauces there appears to be developed simultaneously and through one and the same agency, and apparently after the same method, hyaline masses on the throat and palate and ordinary fibrin in the trachea, and each material seems to shade off almost imperceptibly into the other. It is scarcely conceivable that entirely different processes are going on in the two regions: rather must we conclude that fibrin and hyaline are in principle the same.

C. Transitions can be observed both in cases of coagulation-necrosis and in true fibrin. In fresh infarcts of the heart the foci almost exactly resemble fibrin macroscopically, and microscopically we find the muscle-fibres slightly granular, often still striated, but without nuclei. Later in the affection—*i.e.*, in cases where the foci appear tendinous—we discover under the microscope the most exquisite development of hyaline matter. The same thing can be observed in renal infarct, tumors, etc. In all of these there is no evidence of the extravasation of some substance which may undergo a hyaline transformation, but the cells themselves have become hyaline. We find also a waxy degeneration of the muscles, in which, as in diphtheritis, the material seems to be hyaline from the outset.

D. In such processes as tuberculosis, which usually lead to cheesy metamorphosis, there may also appear a development of hyaline matter (hyaline-, or, incorrectly, myxomatous-tubercle). Here, too, it is exceedingly probable that we have to do not with two degenerations different in principle, but with the same process in different stages of development.

We must finally consider the question why sometimes hyaline and sometimes non-hyaline coagulation occurs. In the examples given of coagulation occurring outside of the body, the differences in the case of cheese may be due to variations in the amount of pressure applied. The stiffened hyaline blood-plasma may be produced, because the coagulation took place so slowly at the prolonged low temperature employed. Within the body it is probably not always the same cause at work to produce the formation of hyaline. Still, one circumstance seems to favor it especially,—namely, the action of a very great excess of plasma upon the coagulated or coagulating masses,—whether coagulation-necrotic or fibrinous.

This excess may be supplied in several ways.

(*a*) The stream of plasma may act for a long time and very thoroughly upon matter already coagulated, but not yet hyaline. The latter is accomplished when the fluid can flow in between the individual parts of the clotted mass, which have become separated from each other,—as, for example, in old infarcts, "*kanalisirte*" fibrin, and in masses of cheesy degeneration which have been penetrated by blood-vessels and divided by fissures. Probably also pressure has much to do with the production of hyaline from fibrin in some cases, as exemplified in the deeper layers of the fibrinous coagula in an aortic aneurism, in which the pressure is quite considerable.

(*b*) The preponderance of pressure may be effected by its coming into relation with the substance destined to coagulate, not throughout a long time, but in great abundance, and from the outside: thus the material, even though of moderately large amount, becomes hyaline at once. The hyaline masses of diphtheritis of the throat are formed in this way.

(*c*) Finally, the permeating plasma may not be actually abundant, but the foci of coagulation may be isolated and so small that the presence of fissures is not necessary. This is well seen in organs wherein parenchymatous portions only are affected, while the connective tissue supporting the blood-vessels remains alive. The coagulated masses can either then be hyaline from the outstart, or become so after a very short time.

From what has been adduced, it follows that many of the masses designated "hyaline" are to be classified as coagulated substances. Of still other substances presenting the characteristics of hyaline matter, it is certainly possible that some owe their existence to a previous coagulation; and of these—with the reserve that it is

only a supposition—Weigert places in category (*c*) that formation of hyaline matter seen in the deposit of this substance in the walls of capillaries and in elastic membranes. In this manner, also, Recklinghausen probably correctly explains the deposition of amyloid matter. This substance would, then, but represent a still more advanced metamorphosis of the coagulated material, with still other tinctorial characteristics,—*i.e.*, would be but a more highly potentized hyaline substance. That the hyaline in the cases of capillaries and of elastic membranes is developed from the fixed cells of these parts is exceedingly improbable, since the presence of cells rich in protoplasm is required for its formation, and the cells in these situations are few in number and contain but little protoplasm. Recklinghausen believes that it is developed from leucocytes which have been deposited there and become amalgamated (fused together). But there is absolutely no proof of the truth of this view, and much to be said against it. We find no flakes of hyaline matter and no leucocytes still preserved in proportion to the amount of hyaline found. Therefore, although this explanation would accord so well with that of coagulation-necrosis, we can scarcely avoid the adoption of another view,—namely, that the hyaline already formed by previous coagulation (derived perhaps from disintegrated blood-plates or leucocytes), and in the finest possible state of division, is in this form *deposited in the tissue*. That the material was so very finely divided, and that therefore each particle of it was surrounded by a comparatively great excess of plasma (see (*c*) above), are the reasons why it became hyaline at the outset.

This conception is also of importance in comprehending the production of amyloid matter, as has been already indicated.

4. *Recasting*. Closely connected with the formation of hyaline is a transformation of coagulated matter, which Weigert calls a "recoinage" or "recasting" (umprägung), inasmuch as a substance is produced thereby which simulates almost exactly sclerotic connective tissue or a tendinous structure. This may be observed in infarct of the heart and in fibro-myomata of the uterus. In the latter the fibrous portions are produced by a coagulation-necrosis of smooth muscular fibres, followed by a gradual organization,—*i.e.*, they become penetrated by blood-vessels, and are transformed into hyaline masses. In fact, the "fibrous" portions of a hard fibro-myoma contain exceedingly little true connective tissue. That calcification may occur instead of this metamorphosis is a proof of the disposition of myomata to undergo necrosis of the muscle-substance.

Another example of this "recasting," this apparent reformation of tissue, is to be found in the change which takes place in the coats of aneurisms. Out of the ordinary fibrin here there may be developed a material which macroscopically has all the appearances of true connective tissue, but which under the microscope reveals only the slightest amount of this penetrating the hyaline-remnants of fibrin.

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

PART I.—GENERAL QUESTIONS, CASES, ETC.

KELOID.—Mr. Jonathan Hutchinson (*London Medical Times*, May 23, 1885) calls attention to the beautiful picture in Alibert's work, representing a raised, glossy, scar-like growth, flat in the surface and with abrupt, irregular margins, from which spurs project into the healthy skin, occurring most commonly (as in Alibert's plate) in the middle of the chest, as the typical keloid. The name keloid is now no longer used to designate any other disease of the skin. A perceptible scar almost universally precedes the occurrence of keloid, which, however, once it has begun, may extend far beyond the limits of the original scar. In a very large majority of cases keloid shows a tendency, after some years' duration, to spontaneous disappearance. This is more particularly the case where the keloid is restricted to scar-tissue. In children the scars of burns thus attacked almost invariably get well, and their duration in many cases is only short. On the contrary, when keloid has begun in a very small scar and has spread widely at the expense of sound skin, it persists much longer without change, and may possibly last out the patient's life.

There appears to be reason to believe that keloid may at times assume a constitutional form, and Hutchinson gives the case of a lady who, after suffering with

keloid of the chest for more than ten years, developed the same disease in other parts of the body, while the original lesion became ulcerated in the centre, and healed at the upper edge while advancing at the lower. One of the new lesions was a streak of induration two or three inches long, of a bright red color, consisting of hard knots embedded in the skin. Just above the navel was another long streak of similar character, but less pronounced. Two lesions, probably the beginning of fresh keloid tumors, appeared near the streak last mentioned, on the abdomen. They were conical papules about as large as the end of the little finger, and of a dusky red color. They were not glossy or smooth, but looked much like abortive boils. They had been present about a year.

Hutchinson considers it unadvisable to operate in keloid in the great majority of cases. When, however, keloid begins without any obvious preceding scar, and where it persists for very long periods and is a cause of great suffering, it may be fair to give the patient the chance afforded by an excision. It may be that, even if the keloid should return in the excision-scar, it would not be so painful nor inconvenient as before. Hutchinson has operated in two cases of what has been called subcutaneous keloid, the growth taking place in the corium or even in the subcutaneous tissue, and never tending to cause the raised, bossy patch which characterizes the common form. This subcutaneous, or at any rate not cuticular, form is very rare, and its diagnosis from sarcoma of the skin is very difficult. Hutchinson gives an account of these cases in full, for which we have not space here.

The conclusions reached by him respecting keloid are substantially as follows: 1. With keloid, as with other skin-diseases, too close a conformity to the type-form cannot be expected. 2. For clinical convenience, several varieties may be recognized in which the prognosis differs as to disappearance and proneness to return after excision. 3. In one of these, the most typical, keloid begins in very small, perhaps forgotten, scars, and slowly spreads far beyond their limits into sound skin. The extension and duration are indefinite, the usual features well marked. There is great proneness to return very quickly after excision. 4. In a second variety keloid begins in the centre of large scars, as burns, is seldom well characterized, often does not extend beyond the scar, and, especially in young persons, tends to disappear spontaneously. 5. In a third form the keloid-growth is deeper, never produces glossy, elevated patches, appears not in scars, but in old inflammatory patches. This form is less prone to recur after incision than the others. 6. Cases of multiple keloid prove either that there is in some persons a remarkable tendency to the disease, or that primary patches have the power of infecting the blood and producing others. 7. There is little or no clinical proof of tendency on the part of keloid to pass into cancer.

Two Cases of Herpes (Zoster?) with Motor Paralysis. — Dr. Waller (*Brit. Med. Journal*, from a German source) reports the case of a woman of 68 who had a painful patch of herpes covering the whole of the right side of the face, stopping abruptly at the middle line. After some weeks the eruption and pain disappeared, being replaced, however, by paralysis of the same side of the face, with loss of taste on the right half of the tongue.

Waller also reports the case of an old man who had an herpetic eruption situated on the anterior aspect of the upper arm on the right side, accompanied by itching and pricking sensations. Eight days after the appearance of the eruption the patient found himself unable to raise or extend the arm. There was no pain or swelling in the muscles or joints, and the electric reactions were normal. The location of the eruption and of the paralysis both indicated the circumflex and the musculo-cutaneous as being the nerves affected. Treatment by electricity restored the arm to its normal condition.

(Compare the article by Strübing translated in the *Medical Times* for January 9, page 281.)

Yaws and Frambœsia.—The disease known as "yaws," "frambœsia," "pian," etc., and to which it has recently been proposed to give the name "Polypapilloma tropicum," has been studied by Pontoppidan, the well-known Danish dermatologist, in a recent visit to the Lesser Antilles and the interior of San Domingo. From his brochure (kindly sent the reporter) we learn that he has observed it

chiefly in the colored race, whites being almost invariably exempt, either from some race-idiosyncrasy, or, as Pontoppidan is inclined to think, rather from their superior cleanliness. Here the reporter differs from him, as he has observed this and similar affections among the colored citizens of Philadelphia, who are certainly of more cleanly habits than the average German.

Frambœsia is a local, contagious skin-affection, occurring without perceptible general symptoms, which shows itself in the form of small papules rising under the skin. When these have reached the size of a split pea the epidermic covering is thrown off, and the lesions appear as small tumors covered with a yellowish crust, looking like dirty ivory counters or a round bit of cheese. When the crust is removed, a moist, reddish, but not ulcerating, raised patch is observed, resembling the mucous papule of syphilis, and when the lesions are situated about the genito-anal region the resemblance is very strong. If proliferation has been rapid, the tumors may become hypertrophied and assume a raspberry-like appearance.

Pontoppidan correctly draws attention to the fact overlooked by Fox, Duhring, and other writers, that the removal of the crusts does not leave an ulcer behind, but only a moist surface. The affection, in fact, is highly superficial, belonging rather to processes like psoriasis or lupus erythematosus than to the more destructive processes.

Examination of the microscopic appearances of the eruption, made, we believe, for the first time by our author, demonstrated the absence of any fungus like tricophyton or microsporon either in the crusts or deeper. Below the layer of dried pus and epidermic cells was found a layer of granulation-cells in no way distinctive. But in the largest and best-developed patches the papillary layer was well marked and usually intact, though the papillæ were flattened, and the rete wasted and full of round cells. The corium was everywhere normal. Though perhaps hyperæmic and succulent, it contained no foreign elements. The disease therefore, in all probability, is situated in the rete Malpighii. The affection, though almost certainly contagious, must continue until the character of the contagion is made out to be classed among the neoplasmata. Pontoppidan prefers to call it yaws.

Histological Changes in Syphilis of the Skin.—Neumann (*Vierteljahrschr. f. Derm. u. Syph.*, xii. p. 203), in an elaborate paper illustrated by superb chromolithographs, goes into the histology of dermatosyphilis very thoroughly. His conclusions are essentially as follows: 1. It is known that the syphilodermata, anatomically considered, depend essentially upon round-cell infiltration in the immediate neighborhood of the vessels. While those of the upper layers of the cutis and the pars papillaris are chiefly affected, the arteries and veins of the deeper layers of the cutis, the panniculus adiposus, are likewise more or less affected. The intensity of the pathological changes is less marked in the recent forms of the macular syphiloderm, but becomes marked to a high degree in the papular and tubercular lesions and in gummata.

The disease-products are found in the case of macular syphilodermata only in the papillary layers, without penetrating to the epidermis. In proportion as the growth advances this boundary is overstepped, the rete becomes infiltrated and its lower boundary obliterated, so that the round cells come to be immediately beneath the tightly-stretched horny layer.

The exudation-cells, at first true round cells, become spindle-formed at a later period, and appear thus to a preponderating degree in the outer walls of the vessels.

The pigment occurs usually in the form of granules of various size and color, usually orange to brown. The pigment-granules occur partly in the exudation, partly in the connective-tissue cells. In the first case resorption takes place readily, but in the latter case slowly or not at all.

The papillary fibres appear spongy and clouded molecularly. In gummata this cloudiness is observed in the deepest layers of the cutis.

The follicles are variously affected. The hair-follicle shows round cells not only in its neighborhood, but also in its outer root-sheath, which in the acneiform and lichenoid lesions sometimes take on club-shaped forms and cystoid enlargements. Similar collections are also observed about the sebaceous glands.

Giant-cells are found in the acneiform, lichenoid, and gummatous lesions, but not in macular, recent, lenticular, papular lesions, nor in the initial lesion.

Certain elements of the tissues, as the smooth muscular fibres, seem to offer a peculiar resistance to syphilitic infiltration.

The various syphilodermata being essentially modifications of one and the same process, no sharp histological line can be drawn between them. In certain cases, however, the follicles appear to be the point of origin of the disease; in other cases the papillary bodies, the blood-vessels of which are affected.

In recent syphilodermata the pigmentation goes on to absorption with the disappearance of the exclusively round cells.

Finally, the following important fact results from Neumann's experiments,—namely, that with the diminution of the clinical appearances the anatomical changes do not alter. Exudate cells with pigment in fact remain in the depth of the tissues of the cutis even when the eye of the clinician fails to perceive them.

Scleremia and Scleroderma.—Besnier (*Vierteljahrschr. für Derm. u. Syph.*, 1885, p. 594; from *La Semaine Médicale*), referring to a lecture by Köbner, of Berlin, in 1884, endeavors to bring order out of the chaos which has for a long time prevailed in the nomenclature of this affection. In an earlier article, published in the *Annales* in 1880, on the dermatoscleroses, Besnier divided these into two groups: the diffused or generalized and the partial or circumscribed. In the first of these groups there is only one form, that which was described by Alibert under the name "sclérémie des adultes." This is identical with Thirial's sclérémie des adultes, Gintrac's sclérodermie, and Hardy's sclérodermie œdémateuse.

In the second group are included the other forms: lardaceous, parchment-like, and striated sclerodermas, morphœa, sclerodactylie (Ball), progressive scleroderma, trophic disturbances in the extremities, etc.

Alibert first described these affections, and divided them into the classes of generalized and partial scleroma, which he considered similar processes.

That certain dermatoscleroses occurring at localized points are essentially the same as true diffuse scleroderma—may occur in connection with the latter or pass into it—has been asserted by many authors, Besnier among the number. However, he thinks it better to reserve the name scleremia for the diffuse form, and scleroderma for the other varieties, with the addition of some distinguishing epithet.

Unilateral Pruritus.—Joseph (*Berlin. Klin. Wochens.*, No. 30, 1885), in the case of a patient suffering from complete paralysis of the left side following heart-disease and emboli, observed marked pruritus confined to the affected side. The latter showed loss of motion and sensation, diminution of temperature, the heat of the body diminished, knee-reflex absent, and, while the skin was soft and the sebaceous secretion normal, an abundant perspiration which for weeks was observed on the right side was quite absent from the affected one. A factitious urticaria which was brought out over the whole body was much more marked on the healthy side, where also the quaddels were more persistent.

The treatment consisted in rubbing in the following twice daily:

℞ Chloral hydrat.,
Camphor crystal., āā ʒj;
Vaselin, ʒx. M.

This diminished the pruritus greatly and gave the patient rest.

Lichen Scrofulosus.—Dr. Gottheil (*Jour. Cut. and Venereal Diseases*, May, 1886) gives notes of a case of this curious affection, with numerous references to the literature of the subject. The patient, a boy 9 years of age, showed when first examined ten groups of the eruption exactly similar to one another, and uniformly composed of aggregations of round, pin-head-sized, brownish-red, flattened, slightly-scaling papules; the skin between the elevations being perfectly normal, and the individual lesions showing no tendency to coalesce. No acne-papules or scratch-marks were present. On the abdomen, midway between the umbilicus and the pubes, was a narrow, semicircular patch, some seven inches long, with its concavity turned upward, and above this on either side, on the mammary line, another smaller one. Posteriorly two large patches, some six inches in diameter, occupied each the region of one shoulder-blade, being joined by a connecting band of eruption at their upper borders; while just above the beginning of the natal fold was another and more irregular group. Four smaller patches occupied the hollow

of the back. The extremities were free, as they almost invariably are, with the exception of two well-marked, quarter-dollar-sized patches situated one at either side of the ligamentum patellæ.

The child was in perfect health, without scrofulous taint. Family history exceptionally free from phthisis. The patches had existed for two years, and had never caused any further annoyance than occasional slight itchiness. They were first noticed upon the abdomen, and had slowly grown to the extent above noted. The area of affected skin was slowly increasing. No lesions had disappeared.

The boy was kept under observation for some months without treatment; but not the slightest change was observed in any of the old papules, nor did any new ones appear. Under the free use of cod-liver oil internally and externally, the papules were gradually flattening out and the patches were fading away when the case was reported.

The Symptomatology of Alopecia Areata. — From the beginning of the present century up to a very recent period, says Michelson (*Monatshefte f. Prakt. Dermatologie*, 1886, p. 77), only one kind of disease has been reckoned as alopecia areata, or area Celsi: namely, that variety of loss of hair in patches where the skin shows no marked change either of inflammation or, what is more important, of scaliness, and where the hair in the immediate neighborhood is only in rare cases changed in the slightest degree as regards its outward appearance. The occurrence of hairs broken off just above the openings of the hair-follicles is regarded as a pathognomonic symptom of a parasitic affection. Under these circumstances, no results as regards the pathogenesis of alopecia areata can be expected from the study of cases such as those described by von Sehlen. This author brings forward "a peripheric scaly zone with broken-off hairs of abnormal appearance" as characteristic of area Celsi, and under this erroneous designation reports two cases occurring shortly after each other in two brothers of 6 and 8 years respectively. Here the border of the bald patches was not only covered with small white scales, but "surrounded by moist eczema."

Thin and Lassar, who, according to Michelson, saw in von Sehlen's discovery of the "areacoccus" only a confirmation of their earlier contributions to the same subject, claimed priority for their published views of what they called alopecia areata, Lassar asserting that this form of the disease is accompanied by "free desquamation and secretion."

Michelson feels himself impelled to enter the lists promptly to avert this threatening confusion in nomenclature, and brings forward a series of characteristic cases of what he, with all the best known writers on dermatology, calls true alopecia areata, endeavoring to confine the use of this name exclusively to the disease which it has always been considered to designate. While in the cases of patchy baldness brought forward by von Sehlen the clinical appearance speaks strongly in favor of a parasitic origin, the opposite is the case in the affection the essential existence of which is shown by the cases brought forward by Michelson.

In no stage of the disease in these cases is a trace of dermatitis present, nor can any shade of difference be perceived between the appearance of the centre on one hand and the outer zone on the other. The hairs on the periphery of the bald spots neither diminished in number nor showed broken shafts; *no tendency to conveyance of the disease to other persons, in spite of every opportunity for contagion.* The disease in Michelson's cases was cured, even in the severest cases, without the employment of parasiticides.

The reporter regards this as a most valuable contribution to dermatology. Few dermatologists dare to undertake a merely critical paper, and yet this ungrateful task must be performed from time to time by some one, for in dermatology the itch for appearing in public is constantly leading to crude, imperfect, and erroneous contributions to this subject, which have no more substance than a soap-bubble, but which no one is bold enough to prick. Let us hear no more, then, of the "contagion" of alopecia areata.

(To be continued.)

TRANSLATIONS.

Two New Tests for Sugar.*—The two reactions about to be described are common to cane-sugar, milk-sugar, glucose, levulose, and maltose, and to the

* From a communication to the "Kaiserlichen Akademie der Wissenschaften," Vienna.

carbohydrates and glucosides capable of yielding glucose by the action of sulphuric acid. They do not, however, produce any result with inosite, mannite, or quercite.

1. From one-half to two cubic centimetres of the suspected liquid are treated with two drops of a fifteen- or twenty-per-cent. alcoholic solution of alpha-naphthol, and the mixture is shaken. A slight turbidity results from the precipitation of a little naphthol: sulphuric acid is then added in quantity equal to or even double the volume of the fluid, and the whole is briskly shaken. In the presence of sugar a deep violet color is developed, and dilution with water throws down a violet-blue precipitate, soluble in alcohol and ether with a yellow color, or in caustic potash with a golden-yellow color. In order that the reaction may occur as described, the test must be made exactly as stated.

This test will permit the detection of 0.00001 per cent. of sugar, and, with the exception of vanillin, anethol, methyl salicylate, and a few similar substances, gives no reaction when sugar is not present. These substances, however, either produce the color with sulphuric acid alone, or the precipitate formed when the violet solution is diluted with water differs totally in character from that formed in saccharine liquids. The limit of sensibility of Fehling's test is 0.0008 per cent., and that of Trommer's test is 0.0025 per cent.

2. If, instead of the alpha-naphthol in the preceding test, an alcoholic solution of thymol of similar concentration be employed, the remaining manipulations being the same as before, a deep red varying from cinnabar to carmine is produced; dilution with water brings the color to carmine, and after a time there separates a flocculent precipitate, which dissolves with a pale-yellow color in alcohol, ether, and caustic potash, but with a bright yellow in ammonia.

The delicacy of this reaction is about the same as of that with alpha-naphthol.

After many experiments had shown the trustworthiness of the results given by these tests, it was interesting, on account of their exceeding delicacy, to apply them to the solution of the disputed question whether normal human urine does or does not contain sugar. The results of the first attempts were so decided that the urine examined appeared to be diabetic. The urine of a number of perfectly healthy individuals was therefore examined, but with precisely the same results. The tests were made with alcoholic solutions of alpha-naphthol and thymol, exactly as has been described, and the extraordinary delicacy of the reactions can be better understood by the statement that normal urine diluted to from one hundred to three hundred times its volume with water still gives a recognizable reaction. When the urine is diluted to four hundred times its volume, the test shows no result.

In order that there might be no question as to sugar being the actual cause of the reaction, the following substances were examined and gave negative results with both alpha-naphthol and thymol: urea, creatine, xanthine, uric acid, allantoine, hippuric acid, succinic acid, phenol, pyrocatechin, and indican.

These results fully confirm the opinion advanced by Brücke, and supported by many other observers, that normal urine constantly contains sugar.

These tests may be applied in two different manners in order to distinguish a normal from a diabetic urine.

1. A specimen of normal urine and of that to be tested are equally diluted with water to about one hundred times their volume; the same quantity of each is then tested just as has been described: if the suspected urine give a deeper violet than the normal specimen, it may be considered as diabetic.

2. The urine under examination is diluted with water to from four to six hundred times its volume. Even in this enormous dilution diabetic urine will sharply respond to the reactions of the tests described, while normal urine would give no result when diluted to four hundred times its volume.

After carefully studying the various tests for sugar in urine, F. Penzoldt came to the conclusion that the fermentation test is worthy of the greatest confidence in doubtful cases. All experiments, however, seem to show that the two new tests are decidedly more certain than the fermentation test. They leave but one thing to desire: they do not enable a distinction to be made between glucose and levulose, and although the sugar found in urine will in nearly all cases be glucose, yet various instances have occurred in which levulose was detected also.—*Monatshefte für Chemie.*

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 7, 1886.

EDITORIAL.

A CHANGE OF AIR AND SCENE.

SELF-IMPOSED exile from home and its conveniences and comforts during several weeks or months in the year has become a necessity of modern life, if an opinion may be based upon observation of the habits of those around us. A large proportion of the community, but especially the residents of our great cities, feel the migratory instinct come on most strongly at a time of the year when the attractions of city life are at their minimum and the demands of business least pressing; by a coincidence which is not entirely unaccountable, the various places of resort at this time appear to their best advantage as the centres of life and gayety. A visit to the sea-shore, mountain, or spa demonstrates that this exodus from the cities and interior towns during the summer months is now a pronounced feature of American social life.

When such a complete change in the habits of a community as is involved in exchanging home for hotel, and city for country, life occurs, it becomes a fit subject for study by the sanitarian. It seems ungracious, when persons want to enjoy themselves, to point out the dangers of defective drainage, malaria, or

> "of most disastrous chances,
> And moving accidents by flood and field."

And, moreover, of such they have been warned until all are familiar with the lesson, whether they sufficiently profit by it in the application or not. The particular topic to which we wish to direct attention is the very plain and patent fact that in the selection of mountain-resort or sea-voyage, springs or country farm-house, so few families take medical advice as to which is best suited to them and most likely to render the greatest returns in health and vigor for the outlay of money, time, and exertion. Some have learned by experience that the rarefied mountain air or the denser and damper atmosphere of the sea does not agree with them individually; others are now engaged in accumulating such experience. In other words, of the many who leave home for the summer, some will go to places which exactly suit their physical wants, and return greatly benefited by the change of air and scene; a larger number will go to resorts from which they do not derive the maximum amount of benefit, but still are not injured by their stay; and the remaining few will by destiny or chance go to the place which is exactly the most unsuited to them. Had these taken thought, and medical advice, it is possible that some at least would be spared a sad experience. It is a question the importance of which it would be difficult to overrate, and to which a physician only can give an intelligent answer after a careful study of the patient's condition and circumstances, and as the result of mature deliberation. Upon his reply to "Where shall I spend the summer?" may depend the patient's comfort, health, even life itself. The corollary to this would be that physicians should make a careful study of summer resorts (as far as possible by personal investigation) from both a sanitary and a sanatory stand-point, and not commit the error of sending patients with weak hearts or badly-damaged lungs to the mountain-top; with phthisis in its second stage and asthma, to the sea-shore,—or, in general, sending individuals in a precarious state of health to remote and comparatively inaccessible localities.

Probably the sea-shore is suitable for a larger proportion of the community than the mountain or inland plain: its special dangers are late hours, excesses in eating and drinking, and the depression of vitality

due to prolonged bathing or to standing imperfectly clad in the cold and wet bathing-dress. This frequently causes an intestinal catarrh, which prevails very extensively among the recent arrivals at the sea-side. Little children, on the contrary, who are suffering with summer diarrhœa, and who are not allowed to bathe, are greatly benefited by a change from the city to the shore. With regard to sea-sickness, so often experienced by those who go down to the sea in ships, its occurrence appears to be a matter of accident and idiosyncrasy. In spite of the popular belief to the contrary, sea-sickness is never beneficial. The interference with the digestive functions, and the serious nervous depression, exert an unquestionable deleterious effect, and in weak patients the prostration may last for days, and may even terminate fatally.

THE ETIOLOGY OF PUERPERAL MASTITIS.

IN the last number of the *Times* attention was directed (p. 792) to the constant presence of micro-organisms in infective pus. Recent observations of Passet, Ahlfeld, Cohn, and Bumm show pretty conclusively that in suppurative puerperal mastitis one or more of the forms of pyogenic bacteria are always present in the pus and inflamed tissues. The last-named reporter has collected fifteen cases in which pyogenic organisms were present. In eleven of the cases the organism found was the *Staphylococcus pyogenes* (*aureus* and *albus*), and in the remaining four the *Streptococcus pyogenes*. Bumm's observations further indicate that the two forms of bacteria mentioned produce inflammations which show decided clinical differences. In those cases in which the staphylococcus was found the inflammatory process began deep in the parenchyma of the gland. There was at first swelling, gradually followed by tenderness, fluctuation, and, lastly, infiltration and redness of the skin. In the other cases the inflammation was at first superficial, and extended peripherally from a sore nipple, somewhat resembling a cellulo-cutaneous erysipelas, followed by infiltration and abscess-formation.

Krause, Passet, and Michel have shown that the staphylococcus has the power of producing coagulation of the milk, acting in a manner similar to the ordinary bacterium of lactic acid fermentation (*ferment lactique*, Pasteur). This coagulation is not produced in the body, however, unless there is at the same time stasis of the milk in some of the lacteal ducts. When these two conditions, stasis and the presence of the microbes, coexist, coagulation and suppuration follow. Stasis of the milk in the ducts, in the absence of the organisms, does not lead to suppuration.

The observations of Bumm further indicate that any case of fissure or eczema of the nipple may eventuate in suppurative mastitis if the streptococcus pyogenes be accidentally inoculated. This fact points to the necessity of prompt and appropriate treatment of so apparently trifling an affection as "sore nipples."

THE GLASGOW OUTBREAK.

ON the grounds of a large iron-works situated a few miles from Pottsville, in this State, is a mountain-spring of clear water which has been used for years, and until recently had an established reputation for unusual purity as a potable water. A week or two ago a severe epidemic of diarrhœa and fever broke out in the neighborhood, and prevailed so extensively that the iron-works were compelled to stop for the want of available labor. An investigation by Dr. Benjamin Lee, Secretary of the State Board of Health, and Dr. William B. Atkinson, Medical Inspector of the Board, has been made, resulting in the discovery that the families of the eighty or more persons who were attacked, without exception, were in the habit of obtaining their water for domestic purposes from the spring above men-

tioned; while others in close proximity, who used water from other sources, entirely escaped. In one instance a member of an affected family remained free from the symptoms shown by all the others, and his exemption was attributed to the fact that he drank the water only after it had been boiled to make an infusion of coffee.

No obvious source of contamination of the spring could be detected after careful search. Analysis, however, revealed the fact that both free and albuminoid ammonia were present, though in small amount, the proportion being two one-hundredths and thirty-four one-hundredths parts respectively per million; therefore not too great to be due to surface-drainage from decaying vegetable matter. The water appeared clear and the well clean; no cesspool or cemetery was within close proximity to the spring. And yet the inference seems irresistible that it was the cause of the outbreak. The symptoms were not considered as typically typhoid; but the continued fever, attended by prostration, diarrhœa, delirium and headache, and occasional epistaxis, was considered to be of typhoid character, although no rose-spots were detected. Three of the patients have died, but no post-mortem examination has yet been held.

Meanwhile, under the direction of the State Board of Health, sanitary precautions have been adopted under which the epidemic is rapidly declining. There are very few new cases, and the patients are almost uniformly improving.

On account of the meeting of the International Medical Congress in Washington on September 5 of next year, the meeting of the Seventh International Congress of Hygiene and Dermatology at Vienna, which had been fixed for the second week in September, 1887, has been postponed to the end of the month, in order that those who desire to participate in both Congresses may do so.

NOTES FROM SPECIAL CORRESPONDENTS.

PARIS.

To the Philadelphia Medical Times:

MEDICAL news in Paris is rather scarce at present, and everything has settled down to the usual quiet of this season of the year, and the attending physicians and surgeons to the various hospitals are preparing to take their summer leave. Yet the hospitals are generally full, and a great deal of the routine work is going on.

At the Beaujon, a general hospital for both male and female patients, I saw some interesting cases. I was surprised to find so many cases of epithelioma of the mouth and throat. Many of them had been operated on; in some cases the entire half of the lower jaw had been removed, and in others only partial resections. I saw one man whose larynx and a portion of the trachea had been removed. He breathed through a tracheal tube, and I was told he swallowed very well. The operation had been performed forty days previously, but it was thought the disease was returning.

I saw in a number of cases the results of ovariotomy and Battey's operation, and several more cases awaiting operation. On Monday last I witnessed, by invitation of the surgeon-in-charge, Dr. Labbé, the operation of total hysterectomy for carcinoma uteri. The operation lasted one hour and forty-five minutes, and was entirely successful. It was done in a pavilion-cottage, where all such operations are performed under antiseptic precautions, two large steam spray-apparatus acting and filling the room during the time from the beginning of the operation. The temperature of the room was 25° Cent., and there were administered about fourteen drachms of chloroform: of a two-ounce vial about two drachms were left. He used catgut ligatures, cutting them off short. The only mishap in the operation was the slipping off of the ligature of the left tube; he secured it by catch-forceps without harm.

A case that interested me very much was that of a woman suffering with Pott's disease. There was a tumor at the seat of the disease, in the lumbar spine, as large as a hen's egg; but there was an immense tumor on the inner and upper aspect of the thigh, near the groin, from which M. Labbé aspirated about fifty ounces of pus, and injected through the aspirating-needle, which was not removed, about six ounces of a mixture composed proportionately of three grammes of ether and three grammes of iodoform. As might have been expected, the woman writhed in great agony, and we left her in the greatest pain. In injecting the mixture, he also inflated the sac with air to its former dimensions. He said

he had cured several cases like it in the same way. M. Labbé performs all the operations in general surgery and all gynæcological operations. There is no distinction, and all are performed equally well. The staff of the hospital consists of Courvoulhier, Labbé, Fernet, Guyot, Gomboult, Millard, and Ribement. Labbé is considered one of the finest surgeons in Paris, and says he is going to attend the International Medical Congress.

At the Hospital Hôtel-Dieu there are also a number of interesting gynæcological cases. All kinds of abdominal operations are performed here as well as at Beaujon. I saw several awaiting operation, and Dr. Villaud, surgeon-in-charge, showed me two immense dried ovarian cysts and the women he had removed them from only a short time before. I was surprised at the great care and pains he took in his operations. For instance, he operated for the removal of a small fatty tumor on the back of the hand of a young woman. It was not larger than a pigeon's egg, and the incision was only one inch and a half long. After dissecting out the tumor very neatly, which rested on the extensor tendon, he introduced three fine silver-wire sutures; under these a short drainage-tube opening upward; closed it very tightly; applied six or eight short pieces of iodoformed lint; wrapped it in a large amount of cotton batting, and secured all by many turns of carbolized or iodoformized gauze bandages; placed the hand on an enamelled pillow, and over this an iron frame for protection. He applied previous to the operation Esmarch's rubber bandage, and used a spray of ether. There was no bleeding. Iodoform is used very extensively in all these operations. Indeed, the odor of carbolic acid was not apparent to me in any of the dressings in the hospital.

I attended also the ophthalmological clinics of M. Panas. He has a large number of cases of the various diseases of the eye, but nothing that attracted special attention. The internes have each a table and lamp to himself, of which there are twelve or fifteen in two dark rooms, and when the interne is not satisfied with the diagnosis M. Panas re-examines the case and signs the direction, or prescription, as may be, if necessary. The chiefs of the clinics are Germain Sée (medicine), Richet (surgery), and Panas (ophthalmology), all of whom are authorities in their several branches. There are also MM. Gallard, Dufour, Montpierre, and Villaud. Villaud is a fine surgeon. The material furnished in this hospital—and, indeed, in all the hospitals—is immense, and cannot but furnish the best instruction for the great number of students attending, a few of whom are women, one of the latter of whom I met here, a young lady from Scotland.

At the Lourcine there is nothing doing of importance. This hospital is devoted entirely to gynæcology and diseases of women. The wards are plain, simple, one-storied structures, and do not exhibit anything modern. It would be better perhaps if all the hospitals in Paris were torn down and rebuilt, as they all belong to a former régime.

The Salpêtrière, also for women, covers more ground than any hospital in Paris. There are in it a large number of old women. I found there also everything quiet. Professor Charcot (nervous diseases) is absent. Gynæcological operations are performed generally every Thursday, or at least that day is named for the service of ovariotomy, and as written in a note to me by one of the internes, "*Service de l'ovariotomie jeudi matin à* 8½." The service in the hospitals begins at a very early hour,—that is, at eight and a half to nine o'clock, not later than nine,—and if you are not present at the beginning you are apt to miss a good deal.

Monsieur le Dr. Marchant, chief of the surgical clinic at La Charité, has always a full supply of cases. At present, however, there are no cases of special importance or interest.

At the Hospital Saint-Louis one may find all classes of skin-diseases, and it is particularly interesting to those engaged in that specialty.

Paris seems to have lost its prestige as a medical centre, not for want of accomplishments, but for want of that freshness and enterprise so signally apparent at Vienna, Berlin, and even in our own New York and Philadelphia; and no wonder students seek these places in preference. There are but few foreign students at Paris.

S. I. RADCLIFFE, M.D.,
of Washington, D.C.

BOSTON.

THE annual meeting of the Massachusetts Medical Society occurred June 8 and 9, at the building of the Massachusetts Institute of Technology, the President, Dr. Charles D. Homans, in the chair. During the morning of the first day, the members as usual were made welcome at the Massachusetts General, the City, and the Children's Hospitals, at all of which various operations were performed. On the afternoon of the 8th papers were read on "The Abuse of Medical Charity: a Remedy applied in Three Thousand Cases of Out-Door Patients," by Dr. F. F. Doggett, of Boston; "Does the Law recently Enacted by the Legislature permit the Spread of Scarlet Fever?" by Dr. John L. Hildreth, of Cambridge; "The Present Status of Bacterial Pathology, and its Relation to Therapeutics," by Dr. A. N. Blodgett, of Boston; "The Management of Cases of Rigidity of the Os Uteri in Labor," by Dr. William E. Boardman, of Boston; "A Not Well Recognized Source of Domestic Poisoning," by Dr. Charles Harrington, of Boston; and "Albuminoid Cellulitis," by Dr. J. A. Meed, of Watertown.

At the annual meeting of the Councillors, held the same evening, by the reports of the Committee on Membership it was shown that there are at present sixteen hundred and five Fellows in good standing. The receipts of the year have been $10,452.42, the expenditures $8685.05, leaving a balance on hand of $1767.37.

The following officers were elected for the ensuing year: President, Thomas H. Gage, of Worcester; Vice-President, John M. Harlow, of Woburn; Treasurer, Frank N. Draper, of Boston; Corresponding Secretary, Charles W. Swan, of Boston; Recording Secretary, Francis W. Goss, of Roxbury; Librarian, E. H. Brigham, of Boston; Orator, G. J. Townsend; Anniversary Chairman, William L. Richardson.

On the second day, the one-hundred-and-fifth annual meeting of the Society was held. Papers were read as follows: "An Epidemic of Malaria in Eastern Massachusetts," by Dr. Z. B. Adams, of Framingham; "The Causation and Treatment of Lateral Curvature," by Dr. E. H. Bradford, of Boston; "Some of the Results of Fractures," by Dr. Joseph E. Garland, of Gloucester; "The Etiology and Treatment of Summer Diarrhœa of Infants," by Dr. H. C. Haven, of Boston.

The annual discourse, by Dr. R. M. Hodges, of Boston, was listened to with attention by a large audience. The subject was "Undercurrents in Modern Medicine." Among the many topics touched upon were the desirability of possessing some knowledge of biology and comparative anatomy prior to entering upon the study of medicine; a warning was also given lest the training-school system, admirable though it be, should result in inducing the practitioner to leave to the trained nurse administrative details and clinical observations which, in his own interest as well as that of the patient, should be attended to by the physician himself.

At the conclusion of the address the Fellows marched to the Skating-Rink in the vicinity, where some seven hundred or eight hundred sat down to the annual dinner. The presiding officer was Dr. E. B. Harvey, of Westborough; speeches were made by President Pillsbury, of the State Senate, Rev. M. J. Savage, Dr. Gage, of Worcester (the newly-elected President), Professor E. M. Hartwell, of Johns Hopkins University, and others.

The name of Dr. Hartwell reminds me to speak of the immediate purpose of his visit to Boston, which was to participate in a discussion recently held by the Section in Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society on the subject of military drill and other means of physical training in the public schools. In Boston, drill has been practised since the war by the boys of the higher schools, but little has been done in the way of bodily culture for the pupils in general. The subject was first taken up by this Society at the April meeting, when an animated discussion occurred on the merits of the drill, following a paper on the subject by Dr. C. F. Withington.

At a subsequent meeting—June 8—Professor Sargent, of the Hemenway Gymnasium at Harvard College, spoke strongly against the drill, claiming that it failed to meet any of the chief requirements of a proper developmental exercise, and illustrating in the persons of some young men the muscular exercise afforded by the manual of arms, performed with the trunk uncovered, compared with that obtainable from the dumb-bells, clubs, wand, and chest-weights. Professor Hitchcock, for many years in charge of the department of physical training at Amherst College, also spoke adversely to the drill and in favor of a more comprehensive and simple system. Professor Hartwell spoke in a very interesting manner of his personal observations of the complete and satisfactory method of physical training now compulsory by law in all the public schools of Germany, showing that it had proved itself to be feasible on the ground of wide adaptation and moderate expense, and also to have yielded admirable results. There are one thousand teachers in Berlin capable of giving such instruction and holding diplomas from the normal gymnastic schools. The general drift of this meeting was strongly against the drill and in favor of a more judicious method of physical training, which should apply to all scholars of both sexes.

The Brighton prize of two hundred dollars for the current year has just been awarded, by the committee appointed for that purpose by the President and Fellows of Harvard University, to Dr. Charles F. Withington, of this city, for an essay on "The Relation of Hospitals to Medical Education."

The newly-formed State Board of Health, of which I wrote in my last letter, has been organized by the appointment of the following members by the Governor: Dr. H. P. Walcott, of Cambridge, chairman; Dr. F. W. Draper, of Boston, medical examiner; Dr. E. A. Jones, of Taunton, homœopathist; Julius H. Appleton, of Springfield, manufacturer; Thornton K. Lathrop, of Beverly, lawyer; Hiram F. Mills, of Lawrence, civil engineer; James White, of Boston, retired merchant.

It is considered an exceptionally strong board,—which is fortunate, as many important matters are to be referred to it. W.

June 10, 1886.

BALTIMORE.

AT the last annual meeting of the Medical and Chirurgical Faculty of Maryland a committee was appointed to take into consideration the power possessed by the Faculty,

by virtue of its charter, to regulate the practice of medicine in this State. From the report of this committee, which has just been submitted, it appears that the Medical and Chirurgical Faculty, whose charter dates from the first year of the present century, has the legal authority to act as an examining board and decide upon the qualifications of those who desire to practise medicine in Maryland. This privilege has been unclaimed so long, however, that its resumption would probably not be permitted without a struggle by the many quacks who have found a refuge and a domicile here from the inhospitable treatment of the Examining Boards of Pennsylvania, Virginia, and West Virginia. The committee recommends that judicial proceedings be begun against the quacks who abound among us; but, inasmuch as that would require money in the shape of counsel-fees, it is not likely that the incrusted fossils who still have too much influence in the Faculty will lend their consent to any active prosecution. In fact, some of these veteran members seem to be at such times stanch friends of the quacks whom they abuse *ore rotundo* at other times. This was conspicuously manifested last winter, when a proposition was discussed to appeal to the Legislature to pass a medical law similar to the one which has worked so admirably in Illinois and other Western States. The fossils turned out in force and defeated the measure, compelling the committee, which had before been empowered to present it to the Legislature, to withdraw it even after it had passed its first reading. It was not overlooked at the time that a majority of the opponents of progress were those whose absence at the scientific meetings is fully compensated by their overwhelming presence when the annual election of officers takes place. I am free to express my conviction that an active attack of the resignation fever, if confined to the class above designated, would contribute very much to medical advancement in this State.

At the last session of the Legislature a law was passed authorizing the appointment of a Lunacy Commission. The Commission consists of five members, four of whom are physicians. The fifth member is the Attorney-General of the State. They have supervisory control of all public and private establishments where the insane are confined. Quarterly meetings of the board are to be held regularly, but special meetings can be called by two members. The members have similar powers to justices of the peace and coroners in matters connected with the insane. They serve without compensation, but their expenses, when on duty, are defrayed by the State. The executive officer of the Commission is a secretary, who is elected by the board, and who receives a salary of one thousand dollars per annum. His duties are to visit all the asylums for the insane, public and private, in the State twice a year, and report to the board. He shall make as many additional visits as may be demanded by circumstances.

The Commission met and organized a few weeks ago. G. H. R.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MAY 6, 1886.

The President, B. F. BAER, M.D., in the chair.

HOWARD A. KELLY, M.D., read a paper on

ASEPSIS, NOT ANTISEPSIS: A PLEA FOR PRINCIPLES, NOT PARAPHERNALIA, IN LAPAROTOMY.

Medicine, like other branches of science, has been most retarded in its growth by the accumulation of all sorts of useless details. Some of these incrustations still clog the advance of abdominal surgery, and will be given up with a notable diminution in the general percentage of mortality. I refer to the use of carbolic acid and mercuric solutions at the operating-table, and to the continued use of any elaborate abdominal dressing.

The use of antiseptics in the patient's belly is full of dangers and inconsistencies, for the following reasons:

First: If used in strength sufficient to certainly prevent sepsis, the patient is very often killed along with the germs. I have myself seen death from carbolic-acid poisoning. The *American Practitioner*, November, 1881, p. 260, quoted by Dr. Goodell: "The first four cases done in the theatre at the beginning of last session had hemorrhage from the kidneys, and two of them died. I never had anything like that before. It was purely carbolic-acid poisoning: of that I have no doubt whatever." Thomas Keith speaks of several cases in his own practice, and references might be indefinitely multiplied. Regarding the use of the bichloride solution, it is sufficient to say that its use has been very much curtailed in all maternity hospitals, even as a vaginal wash. The danger-line is here a very broad one, for the limit appears only to depend upon the most variable of all factors, the individual susceptibility.

Secondly: It is the great tendency of all operators, and in particular their assistants, to forget the principle involved and pin their faith to the accidental means of establishing it. This can be seen abundantly illustrated in almost any hospital in the land, where a clean napkin worked in and around the joints and grooves of the instruments in use, or carried under the nails of the operator's

fingers, will exhibit sad evidences of soil. Then, too, the actual conduct of the operator is often modified by the false sense of security begotten by the incomplete use of antisepsis. I saw this well illustrated by a surgeon of more than local repute. The case was a herniotomy in which a large femoral sac was opened. The spray was throwing out a dense cloud, instruments and sponges were immersed in a two-per-cent. solution of carbolic acid, and elaborate dressings were ready. A coil of intestine protruded from the wound for several inches, and it lay first on the old hospital-blanket below, and then, in the effort to reach the ring, was turned upon the night-gown above. The antisepsis was here made a farce by these and other glaring inconsistencies.

If germicides must be used at all, let it be before the operation, and in strength sufficient to neutralize any sepsis about instruments, sponges, etc. Then let the operator go to work with clean instruments, clean sponges, and clean hands, and he will need no antiseptic, and the patient's belly will no longer be a battle-field where germs and solutions fight, often with such direful results to the host. It is my belief that it will not be long before the day of solutions will be past, and that in the future the successful surgeon will go to his work with pure water or dry pans for his instruments and fluid enough to cleanse sponges. My own practice has been to use hydrant-water boiled for an hour and allowed to stand, or, better still, distilled water, as used by Professor Schroeder, and independently suggested and used by my friend Dr. Joseph Price. I do not believe that reservoir-water, dirty as it often is, ever contains any of the specific matter productive of septicæmia; but the process of boiling and using only the supernatant liquid makes it perfectly harmless.

Another fallacy discarded by some of the greatest operators, but perpetuated by many, is the transference of the use of the elaborate Listerian dressings of general surgery to the abdominal wound. These dressings, so manifold and multiform, are clearly intended to prevent sepsis from penetrating the now closed abdominal wound. This is an accident which fortunately never occurs in the intra-peritoneal method, the rapid agglutination of peritoneal surfaces effectively closing the sac. A sterile, dry powder will absorb the slight serous discharge at the edge of the wound and suture-exits, and above this some absorbent cotton and a firm bandage is all that is required.

While the danger of infection of the peritoneum through the closed wound is minimal, that of an infection of the belly-wall through stitch-holes is very great; and this is best prevented by the dressing recommended by Keith, of carbolic acid and glycerin, one to eight parts.

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With the mind thus freed from the notion that these solutions and dressings are accomplishing anything,—from two such dangerous fallacies,—operators at large will work with a living consciousness of the real conditions of success, and they will then be on the alert from the beginning of the operation to its close, keeping within the mental horizon an exact knowledge of everything coming into contact with the patient's belly.

The expression of my convictions and practice will be of value in so far as they are in accord with the following letters upon the subject by the two greatest abdominal surgeons in the world, Lawson Tait and Thomas Keith.

Lawson Tait, in a letter dated March 15, 1886, to the writer, says, "I still use tap-water and nothing else: it is never boiled. My instruments are prepared by being washed in soap and water merely. I use no elaborate dressings for the wound, never using anything at all except absorbent cotton-wool.

"Yours very truly, LAWSON TAIT."

From a communication from Thomas Keith, of Edinburgh, written March 16, 1886, I make the following extract: "The secret in abdominal surgery, the secret in all surgery, consists in carrying out the antiseptic principle. You may do this in a simple way or you may do it in a complicated way. All instruments, needles, forceps, sponges, etc., everything about the wound, must be disinfected. A weak carbolic solution applied to the wound can do no good—nor harm. You may safely use hot water. My instruments, after an operation, are scrubbed with a nail-brush, especially the forceps-points. This is repeated before the next operation with a five-per-cent. solution of carbolic acid. The greatest risk is that we put in septic matter on our hands, instruments, and sponges. Sepsis may come from the wound, but it rarely ever penetrates inside. I use a simple dressing of gauze, eight or ten folds soaked in one to eight carbolic acid and glycerin, extending two or three inches or so beyond the line of incision on all sides. Over this some ordinary cotton-wool, a flannel bandage, and nothing else. Use this, and you will never use anything else. And don't look at it for a week or ten days. You ought, for the patient's comfort, to put on an antiseptic dressing of some kind. You will probably often have suppuration with stitches if you do not. Yours sincerely,

"THOMAS KEITH."

DISCUSSION.

Dr. MONTGOMERY expressed his interest in Dr. Kelly's remarks, reinforced as they are by the letters from Tait and Keith. The antiseptic method of treatment has done a great work for surgery, and the successive steps of Listerism and cleanliness have brought it up to the comparative certainty of result now

attained. We can now eliminate almost entirely the antiseptic agents, carbolic acid, mercuric chloride, thymol, etc., and can do as well by the most rigid attention to cleanliness in all details of hands, instruments, sponges, and the skin of the patient. Some years ago he felt gratified that, in a patient upon whom he operated before a class at the Philadelphia Hospital, with Listerism and the carbolic-acid spray, the temperature did not rise above 102°. Now in his private hospital, with rigid attention to cleanliness and thorough washing of the peritoneal cavity with hot water, the highest temperature will be below 100°. After operations involving the opening of the peritoneal cavity, if there have been any opportunity for the escape into it of blood, pus, or cyst-contents, he washes it out thoroughly with hot water. After closing the wound, he covers it with sublimated gauze and absorbent cotton, and secures this with strips of plaster and a bandage. This dressing remains a week without need of disturbance. If gut-sutures or silk rendered aseptic by a coating of wax with carbolic or salicylic acid be used, there will be no trouble about suture-abscesses. In a recent case in which the abdominal walls were two inches thick from adipose deposits, these precautions were observed, and there was not the slightest suture-trouble. He does not now consider the spray of any value, because we cannot use carbolic-acid solutions strong enough to certainly destroy the germs without poisoning the patient, and the spray only washes the germs down into the wound.

Dr. CHARLES HERMON THOMAS remarked that the experiments of Dr. Sternberg, of Johns Hopkins College, a careful and conscientious observer, have developed the fact that some of the antiseptic solutions in common use, three-per-cent. carbolic acid for instance, actually stimulate the growth of bacteria. Perfect cleanliness is the essential point, the foundation of surgical success. He had seen Dr. Kelly operate without disinfectants, his instruments being placed in a dry pan, and his results proved the truth of the assertions he has made this evening.

Dr. M. PRICE had experienced great difficulty in his attempts to secure absolute cleanliness. He had seen half a dozen unclean hands introduced into a peritoneal cavity during operation, simply from curiosity; sponges picked up from the floor, napkins from a dusty window-sill, instruments from a soiled blanket, and each used on peritoneal or absorbent surfaces; sponges that have been filled with pus used again in the peritoneal cavity; and, in general, extreme thoughtlessness in the little details of cleanliness that compelled the full power of antiseptics to bring good results. He has had good results in pyosalpinx even when purulent cysts have burst in the abdominal cavity; but he allows only the operator's hands to enter that cavity, and practises the most thorough washing out with clean water. He has been burned by simply holding a carbolized ligature in his mouth for a few minutes, and feels sure that the retention of a number of such ligatures in the abdomen would be quite likely to give rise to trouble.

Dr. CHARLES MEIGS WILSON said cleanliness, by whatever means obtained, is the great element of success in abdominal surgery. As absolute cleanliness can best be obtained by the use of agents possessing germicidic and anti-putrefactive properties in the preparation of the atmosphere, the operator's person, the instruments, sponges, and dressings, it seems to be the part of wisdom to employ such agents up to the time of and even during the operation. With a perfectly clean room and furniture, clean air, clean instruments, and clean hands, possibly no antiseptic agent would be needed. But, unfortunately, such conditions do not universally or generally exist, and to attain them we must resort to the use of some efficient antiseptic. Care should be taken to employ some agent which is efficient and at the same time non-poisonous. In English and Continental hospitals, where excessive antiseptic precautions are employed, the success attained compared with the previous mortality-rate proves unquestionably the great value of such precautions. The united testimony of experienced American operators as to the value of antiseptic precautions should not be set aside. I believe that all instruments should be submitted to the purifying influence of dry or moist heat; that the towels, sponges, and dressings should be left for twenty-four hours in a boiling-hot solution of mercuric chloride (one to two thousand), and that the silk-worm gut or fine-wire sutures and ligatures should be kept in a very weak solution of carbolized oil. To my mind, the terms antiseptic and aseptic are synonymous. My own experience has taught me that the best and least dangerous antiseptic agents are those which possess rather an anti-putrefactive power,—*i.e.*, those which prevent or retard putrefactive changes,—rather than the more dangerous class of agents which possess decided germicidal powers.

Dr. PARISH: Antiseptics are not intended to take the place of cleanliness. The greater the care bestowed on cleanliness in all details, the less will be the need for antiseptics. Boiled water, filtered, is a good washing material. Patient, hands, and instruments must be clean to insure good results. Absorbent lint wet at the time of using with a one-to-two-thousand mercuric chloride solution is a good external dressing. Dr. Parish agreed with most of Dr. Kelly's statements, but he believes in the value of antiseptic vaginal injections after labor in hospitals. The maternity-wards of the Philadelphia Hospital showed a large number of deaths, varying

from three to ten per cent., for many years prior to 1885; but, last year, in two hundred and forty-seven cases of labor there were but two deaths. One of these was after Cæsarean section in a patient who had been in labor nearly three days before she was brought into the hospital. The other fatal case was in an idiot, and was largely from other causes than the labor, which was not at fault. These good results are due to the use of mercuric chloride injections principally, although we have now new wards and opportunity for frequent change of nurses when advisable. In a case of septicæmia following adherent placenta the patient seemed almost moribund; but hot uterine injections of mercuric chloride, one to four thousand, stimulated her and led to recovery. Water is boiled to destroy possible germs, and filtered to get rid of various impurities not held in solution.

Dr. M. PRICE thought the heat of the injection used by Dr. Parish was the most important element in stimulating the patient; but the mercuric chloride would do no harm, and the fact that improvement commenced and continued from that time is the important point. The reaction against the use of antiseptics should not be allowed to go too far. They have done great good, and cannot be discarded.

Dr. LONGAKER agreed with Dr. Parish, and regretted to hear any disparagement of antiseptics. No reputable maternity can be conducted without them. Dr. Lusk considers that the poor woman delivered in a hospital with the protection of antiseptics is safer than the rich woman in her home with every other safeguard but without them.

Dr. SOPER (formerly of the Rotunda, Dublin), upon invitation of the President, remarked that this was a very mixed question; that neither cleanliness nor antiseptics could be dispensed with. He had seen cases do well under all conditions without antiseptic precautions, and if the solutions are dangerous we must be cautious in their use. He believes thoroughly in cleanliness, and would use antiseptics when he thought them needed. It does not do to run into extremes.

Dr. KELLY replied, in closing the discussion, that he was both surprised and gratified that so many members of the Society had expressed their approval of his paper. In two or three instances, however, he had been grievously misunderstood. He believes it to be the great glory and the crowning triumph of *antisepsis* to have discovered *asepsis*. He had nothing whatever in common with those surgeons who claim that antiseptics have done nothing. The peritoneum is a vast, exquisitely-sensitive "culture"-sac. In the old time chance decided whether the uncleaned hand of the surgeon carried in suitable germs to multiply in the medium, and the chances were greatly against the patient. Now the use of antiseptics accidentally involves rinsings and cleansings which make the surgeon a clean man in spite of himself, and the patient generally escapes. In a more advanced position, and the one in which the surgeon is living up to a *principle*, the utmost precautions are taken by a preliminary use of antiseptics in sufficient strength, and he goes to his operation needing no germicides.

Let the battle-field be outside of the patient's belly, and the germicide will then be sure of the victory every time. Statistics from foreign maternities, as quoted, instead of proving against, are one of the strongest arguments for this position: for there the use of the germ-destroying agent is wholly *without* the patient's body.

Dr. M. O'HARA reported a case of

EXTRA-UTERINE PREGNANCY, WITH RUPTURE OF THE FALLOPIAN TUBE—LAPAROTOMY ON THE THIRTY-THIRD DAY—RECOVERY.

On September 25, 1885, Dr. O'Hara was called to see R. H., who had been in good health until seized, two hours previously, with severe rectal tenesmus, agonizing pains in the pelvis, pains from both flanks, and extending down the right leg and arm. From the tenesmus she thought she would have a stool, and rushed to the water-closet, but, no relief following, rushed to her room and fainted. She was carried to bed; rectal injections were given by those present, but no movement followed, and opiates were given for the relief of the pain. When I saw her she was in collapse, almost pulseless, respiration shallow, extremities cold. The whole surface was bedewed with a cold death-sweat. She could not lie on her left side or back, but reclined doubled up on her right side, and would jump up occasionally with exclamations of agony. The history hastily gathered gave the following data. R. H. was 30 years of age, mother of three healthy children, the youngest one year old; she was still nursing it. She had never been sick, and had menstruated regularly. One menstrual period had been missed about a week before the accident, and she considered herself pregnant.

The diagnosis was internal hemorrhage due to rupture of the Fallopian tube at the fifth week of pregnancy. Opiates and stimulants were used. The next day Dr. Parish was called in consultation and concurred in the diagnosis. There was still some shock; pulsation 130, feeble and irregular; respiration feeble; temperature normal; great pallor, evidently due to the loss of blood. The abdomen was moderately distended, with occasional cramp-like pains; moderate tenderness, but no symptoms of peritonitis. The patient showed signs of reaction, and laparotomy, though discussed, was deferred. Five days after the rupture the patient was able to bear a close examination. The abdomen was greatly distended; there was no tenderness on moderate pressure; resonance was gen-

eral except in right flank, where there was moderate dulness. There was no dulness in the left iliac and lumbar region excepting far back, near the kidney. There was an apparent bulging of the right flank. The vaginal surface was generally œdematous; the anterior wall of the vagina was thicker at the cervix and to the left. The cervix was moderately soft and patulous; no bulging of the posterior pouch. It was not deemed advisable to use the sound. The urine was almost black in color. Pulse 104; temperature 99°; respiration normal. Two days later a marked jaundice appeared, although occasional vomiting and purging of bile occurred. A few days later a swelling was noticed on both sides and in front of the cervix, and a bloody, painless discharge, containing decidua-like fragments, escaped from the uterus, and the dulness in the right iliac region disappeared. Urination became painful and difficult. The patient felt so much better that she desired to get up.

Three weeks after the first attack a terrible flooding occurred; it lasted for an hour, and slight hemorrhage continued afterwards. There was decidua in this discharge. At the same time the suprapubic tenderness extended towards the right and slightly increased on the left side, extending upward as high as the umbilicus. Chills and a rise of temperature to 101°, vomiting, constant sharp cutting pains, and emaciation with signs of softening along the crest of the ilium, and general appearances of blood-poisoning, occurred, and surgical interference was strongly urged as the only means of averting death. On the thirty-third day Dr. Parish operated, and he prepared the following report of the operation:

"There were present Drs. O'Hara, R. P. Harris, De F. Willard, and McElroy. I proposed to cut down directly on the tumor by an incision immediately above the outer portion of Poupart's ligament, believing that the tumor consisted of blood-coagula and pus located external to the peritoneum, and that the anterior parietal peritoneum had been dissected up to such an extent that the mass could be incised and emptied without opening into the peritoneal cavity, and without incurring the possibility of objectionable fluids reaching the serous surface. I also believed that the peritoneal cavity was clean, and that there had been no general peritonitis.

"The gentlemen present advocated a median incision for purposes of exploration, and in deference to their views I first cut through the linea alba just below the umbilicus, making an incision long enough to admit two fingers. The peritoneal cavity was found empty, and the peritoneum quite normal, though somewhat congested. The exploring finger showed that the mass was external to the peritoneum, and had extended upward from the left half of the pelvis to a level with the umbilicus. The broad ligament had become obliterated by separation of its layers. It was not thought advisable to explore with the finger with the view of determining the condition of uterus and ovaries and tubes. The peritoneal covering of the abnormal accumulation was evidently thin and tense, so that a careful exploration as to the condition of the uterine appendages would have endangered its rupture and the probable development of general peritonitis. It would have been an easy matter to have stitched the parietal wall of the tumor to the walls of the median incision, and to have then by incision emptied the mass of its contents. But such a procedure would have been attended with risk of leakage of the offensive fluid into the peritoneal cavity.

"To avoid this risk I now made another incision along the line of original election,—*i.e.*, above the outer border of Poupart's ligament,—and readily reached the mass-cavity without wounding the peritoneum. This incision was made long enough to admit two fingers. About one quart of blood-coagula, fluid blood, and pus escaped. The fibrinous masses were removed, and all attached portions were scraped off with the fingers. The curette was avoided chiefly because of the thin upper wall. The cavity was washed out with antiseptic fluid.

"The median incision was closed with sutures, and a drainage-tube was introduced into the mass-cavity. An incision could not have been safely made through the vagina, as the intervening tissue was too thick and its vascularity too great. The incision made admitted of more thorough emptying of the cavity."

The patient suffered no shock from the operation. There was a slight sanguinolent discharge, containing small clots, from the drainage-tube, amounting to about two ounces in twenty-four hours. Nourishment was taken fairly. The cavity left at the time of operation held thirty-two fluidounces. In two days it had contracted to one fluidounce, but the discharge was purulent and offensive. A bloody discharge from the uterus had continued since the operation, but was free from odor and diminishing. The last sutures were removed five days after the operation, and two days later the drainage-tube was replaced by a tent. Two weeks after the operation the uterine discharge had ceased, but free bleeding from the wound occurred. There had been no exertion, sneezing, or coughing to cause this hemorrhage, which occurred about eight weeks after the last menstruation; but, a week later, a bloody discharge occurred from the uterus and wound. The temperature rose to 103°. There was no pain on pressure, but there was a suspicious hard spot in the left iliac region. Twenty-four days after operation the patient was permitted to sit up, and while cheerfully singing felt blood streaming down her legs

from the wound; clots passed also from the uterus and rectum. She felt the rectal tenesmus and pains in right lower extremity similar to those felt at first seizure. Much blood was lost. A similar bleeding occurred three days later, and as life was endangered it was thought necessary to give ether and explore the cavity. It was found that the tissues had been dissected up by accumulated blood and pus until the cavity extended down the side and front of the uterus and communicated with the rectum at the upper end. The cavity was thoroughly scraped with a curette, and was then packed with alum-sponges after disinfection with Platt's chlorides. The patient reacted well. When the wound was injected, nothing came from the wound; but an injection into the rectum came out of the wound, and there was a fæcal odor about the wound. Next day the sponges were removed and muslin tampons wet with phenol sodique were introduced. The packing was changed twice each day. Discharges of offensive fæcal matter and a small gall-stone escaped from the wound.

On February 15, nearly four months after the operation, the patient is noted as doing uniformly well. The wound is closing, the exudation about the uterus and vagina is disappearing, and the odor and elimination of gas while dressing the wound have disappeared.

May 1. Patient has gained greatly in flesh, and presents the appearance of perfect health. A very small, short sinus alone remains. The communication with the bowel has closed entirely. Menstruation occurs normally, and there is no bleeding at any time from the wound.

DISCUSSION.

Dr. PARISH made a few remarks upon the history of this case and the difficulties surrounding a diagnosis. The patient was 30 years of age and perfectly healthy. She missed one menstrual period, and a week later, possibly in the fifth week of pregnancy, there were signs of internal hemorrhage with shock. Dr. O'Hara at this time made his diagnosis—doubtless correct—of tubal pregnancy with rupture of the cyst. The patient commenced after a few hours to rally. Dr. Parish was called in consultation the next day. He suggested an operation to remove the cause of the trouble, but did not urge it, as the symptoms had ameliorated. The patient continued to improve for several days. Afterwards a tumor appeared. The first hemorrhage, being into the folds of the broad ligament and limited, did not show; but as repeated hemorrhages occurred the tumor increased, pus formed, the embryo softened, septicæmia without peritonitis was developed, and then the operation was performed, and was then imperatively demanded. Three months after the original shock a sudden and nearly fatal hemorrhage occurred simultaneously from the wound, vagina, and rectum. Evidently there was a tubal communication between the uterus and the wound, and a large rectal fistula had formed. This fistula healed without any separate operation.

There was evidently at the beginning a pelvic hæmatocele without peritonitis, due to a ruptured Fallopian tube. The early operation was proposed, but did not meet with approval. It was evident the hemorrhage was extra-peritoneal, as it would most probably have been fatal if it had burst into the peritoneal cavity. He deprecated the expectant plan of treatment of cases of rupture of the cyst of tubal pregnancy; but in this instance the amelioration of the symptoms at the time when first seen by him led him to hesitate as to the necessity for immediate operation. The sequel showed that in this case an early laparotomy would have been of no service. The patient's recovery is complete.

Dr. HARRIS heard of this case a week after its commencement, and believed from what he knew of it at that time that it would be advisable to perform the laparotomy; but subsequent developments indicated that the hemorrhage was extra-peritoneal and gradual, and there was therefore no immediate danger to be overcome. When, however, he saw the patient, October 28, he was satisfied that her constitutional symptoms required that an exploration of the abdominal cavity should be made, the blood-cyst defined, and then that the blood should be evacuated above the left groin. This opinion being sustained in the consultation, the operation was performed accordingly.

Dr. PRICE inquired if any examination of the condition of the gall-bladder had been made at the time of operation. Was the jaundice due to mechanical obstruction or to the general condition?

Dr. BAER at first thought an error had been committed in not operating at first, when the diagnosis was made and the tube ruptured; but the full history puts the matter in a different light, and would cause great hesitancy about rushing in in a similar case.

Dr. O'HARA had made his diagnosis at the time of the accident. Operation could not have been performed then on account of the collapse, and after that passed away it did not seem called for until the time of its performance. One question has risen in his mind from the subsequent history of the case: Would it not have been better if the wound had been packed from the time of the operation?

SÄNGER'S CÆSAREAN OPERATION.

Dr. ROBERT P. HARRIS said, I desire through this Society to give publicity to the following statement, received a few days ago in a letter from Dr. Sänger, of Leipsic, from which it will be seen that his method now

stands unrivalled in the world in its ability to save human life. Locally considered, the Porro operation as performed in the Santa Caterina Hospital, of Milan, Italy, has until recently far exceeded in its proportionate success all other Cæsarean methods in any hospital or country; but this, the best of all Porro successes, has now to be rated second as compared with its younger German rival. Laparo-elytrotomy, a year ago, stood upon the same level with the Sänger operation in its rate of success; but now the latter far outstrips it in the number of times it has been performed and in its proportion of cures.

According to Dr. Sänger's letter, his operation, with its modifications and simplifications, has been performed twenty-five times, saving eighteen women, or seventy-two per cent., and resulting in twenty-two children being delivered alive, or eighty-eight per cent. In these are included three fatal American cases which, if not in an absolutely hopeless state before the operation, gave a very minimum hope of success. The European twenty-two operations saved eighteen women, or $81\frac{9}{11}$ per cent. In the Maternity Hospital of Leipsic Dr. Sänger has operated four times, Dr. Obermann once, and Dr. Donal once, saving all of the women and children; in but one woman was there any special trouble after the operation. Dr. Leopold, of the Dresden Maternity Hospital, has operated nine times, and Dr. Korn once; the former lost one woman, but all of the children were saved. Thus we have fifteen women and sixteen children saved under sixteen operations; a mortality for the former of only $6\frac{1}{4}$ per cent. Of the four deaths in Europe, two resulted from septic poisoning which existed at the time of the operation, and in the other two subjects it followed it.

Dr. Sänger has such confidence in his method, from the success that has attended it in Germany, that he believes the time has come when it should be preferred to craniotomy, because of its moderate fatality and its saving the child. We should be glad if all of the Cæsarean operations of the United States should be performed after Sänger's method, as simplified by Garrigues and Leopold; but we must not expect very happy results here until our accoucheurs become alive to the fact that delay in operating will make any method fatal in a large proportion of cases. In no country are the capabilities of the old Cæsarean operation greater than in the United States, and in few has this form of delivery been of late more uniformly fatal. To find eighteen recoveries under it we must search backward to January, 1863, and through a record of time covering more than twenty-three years; in which period seventy-three operations have been performed, proving fatal in about seventy-five per cent. This occurred notwithstanding an established fact that a set of early operations will save seventy-five per cent. of the women and still higher of the children in such cases in the United States.

(To be continued.)

PHILADELPHIA CLINICAL SOCIETY.

A STATED meeting was held May 28, 1886, the Vice-President, DANIEL LONGACRE, M.D., in the chair.

Dr. Longacre read a paper entitled "Retarded Dilatation of the Os Uteri a Symptom of Faulty Mechanism. Illustrated by Presentations of Brow and Face, Occipito-Posterior, Transverse, and Breech Presentations." The paper will be published in full at a future date.

Dr. Clara Marshall reported a case of

MAMMARY ABSCESS DURING PREGNANCY IN A PRIMIPARA.

Lizzie H., German, æt. 27, single, domestic, pregnant, with a family history of phthisis (her father and mother having died of that disease), was admitted to the surgical department of the Philadelphia Hospital January 21, 1884.

When admitted, she was suffering from an affection of the right breast. Examination of the lungs revealed the presence of incipient phthisis. As the patient did not come under my care until confinement, Dr. Joseph Hoffman, interne, kindly furnished me with some brief notes of the case, from which I quote.

"The right breast was greatly enlarged, and its appearance so far suggested malignant disease that the idea of excision was contemplated. With this in view a consultation was held, resulting in the abandonment of the cancerous view, and mammitis was diagnosticated, the correctness of which diagnosis the subsequent history justified.

"Poultices were applied, and in a few days pointing occurred and the abscess was opened. Soon two or three other points of suppuration were observed, and the pus was evacuated by incision. In the mean time, the breast was supported in a mammary sling. March 1 the treatment of the case by means of compressed sponge (after the method of Foster) was instituted. This treatment for the first week seemed to act favorably, but at the end of that time so much pain was experienced that the dressing was of necessity abandoned, and the poultices were reapplied. During the time of the application of the poultices, and subsequently, large quantities of pus were evacuated by free incisions. Adhesive strips were now applied, with the effect of relieving pain by the support which they gave, and at the same time the pressure aided in the evacuation of the pus. Within a week they were of necessity removed, several points of inflammation having appeared beneath them, with the production of much pain; the pain was relieved by several incisions, resulting in the evacuation of nearly a pint of pus."

Throughout the progress of the case opiates had to be used to a considerable extent;

the medication also included quinine, iron, whiskey, and, later, cod-liver oil. No temperature-chart was kept, but a rise above the normal was noted at intervals, coinciding for the most part with the accumulation of pus, and abating as soon as this was evacuated. The highest temperature noted was 104° F.

The swelling of the breast, which began about two weeks before her admission to the hospital, the patient attributed to having taken cold, though there was no history of a chill.

The patient was admitted to the obstetrical department April 23, 1884, and upon the same date, after a normal labor, she was delivered of a poorly-nourished male child, weighing five pounds and twelve ounces. This infant was never healthy, and died May 5 (twelve days after birth).

From May 1 (seventh day after confinement) the treatment consisted in extending the various openings by free incisions and by packing the sinuses with lint soaked in carbolized oil; subsequently a drainage-tube was inserted into the one deep central sinus, and carried down to its deepest part; through this tube a solution of corrosive sublimate (one to one thousand) was injected daily, the injection being continued until the solution returned free from pus. During the intervals the mouth of the tube was protected by a layer of lint saturated with the corrosive-sublimate solution. The other sinuses were also washed out and packed with lint wet with carbolized oil. The breast was firmly dressed daily with adhesive plaster. The pus became healthy in character and diminished in quantity, and the sinuses healed, with the exception of the central one. The patient's condition improved, and she was able to leave her bed and walk about the hospital grounds.

July 1. The central sinus is yet unclosed.

July 14. The breast is somewhat indurated, but every sinus is healed.

The infrequency of mammary abscess in pregnancy, as compared with its occurrence in the puerperal state, is illustrated by the statistics of Mr. T. W. Hunn, surgeon to the Middlesex Hospital. Of Mr. Hunn's seventy-two cases, fifty-eight occurred during lactation, seven during pregnancy, and seven in women who were neither pregnant nor in lactation. The points of suppuration in the case I have reported were so numerous that it would be of great interest had there been obtained an accurate estimate of their number. Velpeau records a case which he thus describes: "The breast looks like a large sponge impregnated with pus, or like the nozzle of a watering-pot,—there being fifty apertures for the escape of pus."

Apropos of the suggestion of malignancy early in the case, I may again quote Velpeau, who says, "Such a mistake was committed a few years ago in one of the great hospitals of Paris, by one of the most eminent and experienced practitioners." Sir Astley Cooper reports a similar case, and says, "I could point to other cases. This mistake is more liable to occur when the abscess is *chronic* in character."

DISCUSSION.

In the discussion which followed the report of Dr. Marshall's case, Dr. Daniel Longacre said that he was in the habit of using Billroth's method in the treatment of mammary abscess: "Open every sinus freely, clean out the necrosed tissue, wash out the sinuses, and then apply an antiseptic dressing."

Dr. Susan P. Stackhouse reported the case of a mammary abscess in an unmarried non-pregnant woman. "C. M., æt. 20 years; right mammary gland twice the size of the left; very painful; fluctuation easily detected. The patient was very much excited, and when told that it would be necessary to lance the breast made considerable resistance. Finally she allowed the abscess to be opened, and a free flow of pus followed, after which there was great relief. The subsequent history of the case was without interest. The abscess had been developing for four weeks, and the patient's friends told her that it must be a cancer. There was no pain in the part until the fourth week, the swelling being the only symptom. The patient was thoroughly examined, but no symptoms of pregnancy could be detected."

Dr. Calista V. Luther mentioned a case of threatened mammary abscess in a male, which was aborted by means of the use of bandages and cold compresses.

Dr. Mary Willits related a case which had come under her observation. The patient would not permit the lancet to be used; as a consequence the abscess had opened spontaneously in *four* separate places; from each of these there was a free discharge of pus and milk for some days. At present there is no discharge of pus, but the milk is flowing freely all the time, the patient's clothing being kept saturated. The breast was bandaged with strips of adhesive plaster, having in view the bringing of the edges of the sinuses in contact, and hoping to hasten their union in this way; but in a few hours these strips were entirely loosened, owing to the flow of milk. Dr. Willits asked if the members of the Society could suggest any means by which to hasten the healing of the parts. It is not desirable to *arrest* the *secretion* of milk, as the patient has an infant three months old.

Dr. Mary E. Allen suggested compression of the gland by means of the roller-bandage. She spoke of a case of her own where firm compression was made by means of the bandage, and no milk came into the gland.

Dr. Daniel Longacre referred to Dr. Philander Harris's plan of the treatment of mastitis by bandaging and rest, an account of which appeared in the *American Journal*

of Obstetrics, in the January and February numbers for 1885.

Dr. Clara Marshall would suggest the use of compressed sponge in the case mentioned by Dr. Willits,—*e.g.*, applying the sponge *dry*, securing it firmly by means of a roller-bandage, and then moistening it. The swelling of the sponge, caused by the moisture, causes great pressure on the gland, which will bring the edges of the sinuses together, and thus hasten union. In this case the flow of milk would be apt to produce enough moisture. In a chronic abscess, where there is no pain, compressed sponge acts very nicely.

MARY WILLITS, M.D.,
Reporting Secretary.

REVIEWS AND BOOK NOTICES.

DRUGS AND MEDICINES OF NORTH AMERICA. A Publication devoted to the Historical and Scientific Discussion of Botany, Pharmacy, Chemistry, and Therapeutics of the Medicinal Plants of North America, their Constituents, Products, and Sophistications. Vol. I., RANUNCULACEÆ. J. U. LLOYD, Commercial History, Chemistry, and Pharmacy; C. G. LLOYD, Botany and Botanical History. Cincinnati, J. U. & C. G. Lloyd, 1884–85.

The completion of the first volume of the "Drugs and Medicines of North America" calls for an appropriate notice. The work has been issued in fasciculi, appearing quarterly, at the very low price of one dollar a year. The nine parts which have been issued complete the consideration of the Ranunculaceæ, and form a handsome volume of over three hundred pages. Among the special contributors are found some of the leading authorities on botany, pharmacology, and therapeutics in this country. The illustrations, many of them full-page, are well executed, and add very much to the value of the work, which has not only been carefully prepared from data obtained from all sources, but is also beautifully printed on heavy toned paper.

It is hoped that the profession will appreciate the enterprise of the publishers in bringing it out, and by general subscription insure its support.

A TREATISE ON THE DISEASES OF THE NERVOUS SYSTEM. By WILLIAM A. HAMMOND, M.D., etc. With One Hundred and Twelve Illustrations. Eighth Edition, with Corrections and Additions. New York, D. Appleton & Co., 1886. 8vo, cloth, pp. 945.

The work of revision of the eighth edition of this very successful and popular treatise on Diseases of the Nervous System has been thoroughly done, and a new section added on "Certain Obscure Diseases of the Nervous System." We notice, however, that in the section on Hydrophobia reference to Pasteur's experiments has been omitted, while the opinion is expressed that "the poison in the saliva, and not the wound made by the animal's teeth, is the essential influence in producing hydrophobia. It is not at all certain, however, that the latter may not in some cases produce a modification of the characteristics of the disease, perhaps causing those tetanoid phenomena which are occasionally present." "The nature of the virus," he declares, "is unknown. It is probably of the nature of a ferment, but this cannot be regarded as satisfactorily proved."

The work is freely illustrated, and the extensive knowledge of nervous diseases possessed by the author is communicated in such an interesting style that the position which it has maintained as a text-book for the last fifteen years is easily understood.

THE PRINCIPLES AND PRACTICE OF SURGERY. By FRANK HASTINGS HAMILTON, A.M., M.D., LL.D. Illustrated with Four Hundred and Seventy-Two Engravings on Wood. Third Edition, Revised and Corrected. New York, William Wood & Co., 1886. 8vo, pp. 989.

Thirteen years have elapsed since the second edition of Hamilton's Surgery was welcomed by the profession. During that period a revolution has taken place in surgical methods and the field of operative surgery wonderfully extended. The present edition has the advantage of the author's extensive experience and study, the results of which are evident in his thorough work of revision.

The work is divided into two parts, General Surgery and Regional Surgery. In the first part are considered surgical pathology, wounds, venereal diseases, lesions of the nervous system, aneurisms, as well as fractures, dislocations, amputations, excisions, diseases of bones and joints, deformities, and tumors; the second part takes up the surgery of different organs and regions of the body systematically, ending with a consideration of anæsthetics and a disquisition upon the art of primary union and the value of antiseptics in obtaining union by adhesion in large incised wounds. The views of the author are positively held and forcibly expressed, and, although it is not expected that they will be all received without question, yet the ability and experience of the author will at least entitle them to careful consideration.

DISEASES OF THE STOMACH AND INTESTINES. A Manual of Clinical Therapeutics for the Student and Practitioner. By PROFESSOR DUJARDIN-BEAUMETZ. Translated from the Fourth Edition by E. P. HURD, M.D. With Illustrations and One Chromo-Lithograph.

HAND-BOOK OF PRACTICAL MEDICINE. By DR. HERMANN EICHHORST, Professor of Special Pathology and Therapeutics and Director of the University Medical Clinic in Zurich. Vol. I. Diseases of the Circulatory and Respiratory Apparatus. One Hundred and Three Wood-Engravings. Vol. II. Diseases of the Digestive, Urinary, and Sexual Apparatus. William Wood & Co., New York, 1886.

INSANITY AND ITS TREATMENT. Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. FIELDING BLANDFORD, M.D. Oxon. Third Edition. Together with Types of Insanity: An Illustrated Guide in the Physical Diagnosis of Mental Diseases. By ALLAN MCLANE HAMILTON, M.D., etc.

DISEASES OF THE SPINAL CORD. By BYRON BRAMWELL, M.D., F.R.C.P. Edin. Fifty-Three Colored Plates and One Hundred and Two Fine Wood-Engravings. Second Edition.

THE GENUINE WORKS OF HIPPOCRATES. Translated from the Greek, with a Preliminary Discourse and Annotations, by FRANCIS ADAMS, LL.D., Surgeon. In Two Volumes.

This admirable selection of standard works of reference comprises the issues of Wood's Medical Library for the first seven months of 1886. They are clearly printed and neatly bound and well illustrated. The services of this enterprising firm, in popularizing good medical literature by placing it in attractive form and at a low price, are quite generally appreciated and acknowledged by the subscriptions to the library, which improves every year.

NEW REMEDIES AND CLINICAL NOTES.

THE RELATION OF CHOLERA TO SCHIZOMYCETE ORGANISMS.—Surgeon-Major D. D. Cunningham reports the result of the examination of alvine evacuations in cholera. The cultivations were carried out with agar-agar, 1.5 per cent., as gelatin did not afford a medium which remained solid at the temperature of the air in Calcutta at the period when the investigation was conducted. Plate-cultivations were made from intestinal materials from twenty-two cases. A development of commas occurred in sixteen; in one of the other cases it subsequently turned out that the case was not one of cholera; in two others the nature of the material was doubtful; in two others the agar-agar had an acid reaction. There remained, therefore, only one case where undoubted cholera material in a favorable medium did not give a recognizable crop of commas; in this case colonies of minute straight bacilli abounded. In one case where no commas could be recognized in the original material, plate-cultivation yielded a crop. The general conclusion on this point is "that the belief in the presence of easily-cultivable commas as a very constant and characteristic feature in the dejections and intestinal contents in cases of the disease is a well-founded one." Thirty-three samples of normal alvine materials were examined, and curved schizomycete organisms were found to be present in varying numbers in every case. In cultivations made from those materials colonies of various kinds, some presenting to the naked eye appearances closely resembling colonies of Koch's comma-bacilli, developed, but in no instance did the true comma-bacilli appear. Neither did any development of true comma colonies occur when cultivations were made from the contents of the cæcum of healthy guinea-pigs, though this material contained many curved organisms. The ponds in and around Calcutta are covered by a scum of Euglenæ except during the rains. The under surface of this scum is a favorable site for the development of schizomycete organisms; among these are many curved forms. Cultivations from this material in feeble alkaline agar-agar jelly yielded colonies of distinct commas.

By cultivating comma-bacilli in various media, Dr. Cunningham succeeded in obtaining varied vacuolate forms, some circular, others elliptical, such as Dr. Klein noticed in cultivations made at low temperatures. Dr. Cunningham found the vacuolation and multiplication by longitudinal splitting to be associated with acidity or partial exhaustion of the nutrient medium. By transplanting again into alkaline media and cultivating in series, typical comma colonies were obtained again on about the fourth plate. Dr. Cunningham believes that the comma-bacillus is polymorphic, and that its absence can only be demonstrated by carrying out a series of cultivations in media highly favorable to its development. Otherwise, he contends, it is impossible to prove that forms capable of being developed by such successive cultivations into typical comma-bacilli may not have been present in the original materials.—*London Medical Record.*

A CASE OF HERNIA OF THE BLADDER THROUGH THE VULVA, WITH STRANGULATION.—The patient was a woman with deformed pelvis, who, after a severe labor, had an enormous vesico-vaginal fistula. She had consented to an operation for the obliteration of the vulvar orifice, but left the hospital before this could be done. The following year she returned in a very bad state. On exam-

ination, a tumor of the size of an orange, of a violet color, was seen protruding between the labia, and this turned out to be the bladder gripped at the entrance to the vagina. Any manipulation of the tumor was attended with great pain and considerable hemorrhage. The obliteration of the vaginal aperture was again suggested, and this time was agreed to and performed under an anæsthetic. The labia minora and the internal surface of the labia majora were cauterized by means of the thermo-cautery, in order to secure large granulating surfaces. These were approximated by means of sutures carried right through, and the labia of the opposite sides were brought securely into contact. Obliteration of the vulvar orifice was thus obtained, a small orifice being left below the meatus urinarius. After the operation no urine escaped while the woman was recumbent, and only to a small extent when erect. It was proposed to fit on a sort of receptacle, but she left before this had been prepared. Some months later, she returned once more as bad as ever. The vesical hernia and strangulation had recurred; and although the vulvar orifice was smaller than in the first instance, the effect of the former operation had been almost entirely destroyed, the husband and the surgeon having apparently worked at cross-purposes. Dr. Polaillon considers the case of interest on account of its rarity.—*Archives de Tocologie.—London Medical Record.*

MISCELLANY.

Medico-Chirurgical College.—The following preliminary announcement has been issued. During the last five years the Medico-Chirurgical College, which was chartered by the Legislature in 1850, has been located at the southwest corner of Broad and Market Streets. The needs of this rapidly-developing institution have outgrown its present quarters, and for some time the trustees have been looking for more commodious buildings. Recently they purchased a large property on Cherry Street, near Logan Square. The location is most excellent for the intended purpose, being near the centre of the city, and yet sufficiently retired to give students and hospital patients the requisite quietude. The lot is one hundred and thirty-four feet square. It is partly occupied by two large and substantial brick buildings, three stories high, with good light on all sides. Extensive alterations will be made, including the construction of an amphitheatre, clinical lecture-room, laboratories, and dissecting-room, besides all the departments of a well-appointed hospital. The lecture-room will be fitted up with an eye to the comfort of the students, individual chairs replacing the benches usually supplied. The rooms for practical work will have all their fittings of the latest and most approved pattern. The hospital-wards will overlook and have easy access to the large garden attached. Plans for the alterations are now being prepared by the architect, and when finished the corporation will have one of the most complete college-buildings in the country.

The following institutions will be associated with the Medico-Chirurgical College in the ample bounds of this newly-acquired property: the Medico-Chirurgical Hospital, the Philadelphia Dental College (which is now at Tenth and Arch Streets), the Hospital of Oral Surgery, and the Philadelphia Hospital for Skin-Diseases. The two last named will be continued as departments of the College and Hospital.

Several notable changes have lately taken place in the Faculty of the Medico-Chirurgical College. Professor William H. Pancoast, who for twenty-seven years taught anatomy at the Jefferson Medical College, was elected by the trustees and has accepted the same chair in the Medico-Chirurgical College. He brings with him the valuable anatomical museum collected by himself and his father. Dr. John V. Shoemaker, lately Lecturer on Dermatology and Teacher of Skin-Diseases in the Post-Graduate Course at the Jefferson College, has become Professor of Dermatology and Venereal Diseases in the Medico-Chirurgical Faculty. Dr. E. E. Montgomery, Obstetrician to the Philadelphia Hospital and Surgeon to the Women's Hospital, has been elected Professor of Gynæcology. Dr. William B. Atkinson has been elected Professor of Pædiatrics and Sanitary Science.

Some other changes of interest will be found in the annual announcement of the College, which has just been published.

Proposed Public-Health Legislation in France.—In the French Chamber of Deputies, M. Siegfried has introduced a proposition involving decided changes in the laws governing the organization and the administration of the public-health service. The decline in the birth-rate in France, and the rapidly-diminishing excess of the births over the deaths, has led men of all political views to unite in support of measures calculated to render more efficient and uniform the laws relating to public health. The Academy of Medicine, and other scientific bodies, have adopted this resolution: "Following the example of the majority of foreign countries, the administration of state medicine should be intrusted in France to a single, independent, administrative direction, competent and responsible as well in relation to the central power as in the departments and in the large cities."

The present proposition is based essentially upon the draft of a law prepared in 1884 by the Comité consultatif d'Hygiène publique,

under the presidency of M. Brouardel. The several sections of the proposed law (1) specifically define the duties of the public-health administration; (2) institute a single direction of the administration of the public-health service; (3) create a service of agents of public health; (4) govern the formation of councils and commissions of public health (at the head would be a national council with six consultants; secondly would come departmental councils and health-commissions of variable number for each department); (5) direct that the deliberations of the several councils shall be transmitted at once to the competent administration, which shall communicate their decisions to the persons interested within a week. A laboratory would be placed under the control of the National Council of Public Health.

The editor of *La France Médicale* dwells upon the capital importance of this proposed legislation, and speaks in very favorable terms of the prospect of its passage by the Chambers.

THE USE OF PURE PEPSIN.—The Pharmacopœia recognizes only pepsinum saccharatum; but the digestive power of the saccharated pepsin dispensed by the druggist does not, we fear, uniformly correspond to the requirements of the Pharmacopœia. This variability in the power of the ferment has led some physicians to doubt or even deny the therapeutic value of pepsin; but a test of the pure preparation, as in the form of Jensen's Crystal Pepsin, will prove its great value in digestive derangement due to gastric debility. It is most efficient when given in recent solution in combination with hydrochloric acid and syrup of orange, though it may be given in the form of tablets if preferred, each containing two and a half grains. Its solvent power has been utilized by surgeons in digesting a blood-clot in the urinary bladder, and by physicians in dissolving false membrane, especially in diphtheria. It has been injected into the interior of morbid growths with encouraging results.

MICROBE OF RABIES.—Dr. G. F. Dowdeswell makes the positive announcement in the *Lancet*, that he has discovered a micrococcus in the spinal cord of dogs suffering with rabies, which he regards as specific and characteristic. It exists principally around the central canal of the cord and medulla oblongata, and thence extends along the blood-vessels, and in some cases was found within the blood-vessels. It was found in very small numbers in the cortex of the hemispheres, and only in the perivascular and pericellular lymph-spaces.

The organism is not shown by ordinary staining agents, and has therefore escaped the search of previous observers. Preparations of the microbe were shown at the Royal Microscopical Society at its June meeting.

THE AMERICAN OTOLOGICAL SOCIETY.—At the nineteenth annual meeting of this Association, held at New London, Connecticut, July 20, 1886, the following officers were elected for the ensuing year: President, J. S. Prout, M.D., of Brooklyn, New York; Vice-President, Samuel Sexton, M.D., of New York; Secretary and Treasurer, J. J. B. Vermyne, M.D., of New Bedford, Massachusetts; Committee on Membership, Gorham Bacon, M.D., W. S. Little, M.D., and E. W. Bartlett, M.D.

THE AMERICAN OPHTHALMOLOGICAL SOCIETY.—The twenty-second annual meeting was held at New London, Connecticut, July 21 and 22, 1886. The following were elected for the ensuing year: President, W. F. Norris, M.D., of Philadelphia; Vice-President, H. Derby, M.D., of Boston; Secretary and Treasurer, O. F. Wadsworth, M.D., of Boston. A number of interesting papers were read at these meetings. Abstracts of the principal ones will appear later.

The next place of meeting was left to the decision of the Council.

THE AMERICAN NEUROLOGICAL ASSOCIATION.—At the twelfth annual session, held at Long Branch, July 21 to 23 inclusive, the following officers were chosen for the year: President, Landon C. Gray, M.D., of Brooklyn, New York; Vice-President, John Van Bibber, M.D., of Baltimore; Secretary and Treasurer, Graeme M. Hammond, M.D., of New York; Counsellers, B. Sachs, M.D., of New York; Wharton Sinkler, M.D., of Philadelphia.

THE LOCAL COMMITTEE OF ARRANGEMENTS OF THE NINTH INTERNATIONAL MEDICAL CONGRESS has completed its organization. Dr. A. Y. P. Garnett is chairman, Dr. J. M. Toner vice-chairman, and Dr. C. H. A. Kleinschmidt secretary. The President of the United States, the Secretary of State, and the presiding officers of the Senate and House of Representatives have authorized the use of their names as patrons of the Congress.

MALTINE WITH CASCARA SAGRADA (RHAMNUS PURSHIANA).—The Maltine Manufacturing Company by an improvement in preparation now present Maltine in a state less viscid and more acceptable than formerly. They have also introduced some new formulæ, prominent among which is a combination of malt with cascara, making a safe and agreeable laxative for chronic constipation.

A COMBINED TONIC AND NUTRIENT.—The liquid beef tonic of Mr. T. Colden, of Baltimore, has been before the profession for a number of years. It contains saccharine, albuminous, and bitter principle in a spirituous solution, and it has been found extremely useful in cases of debility and general depression.

PASTEURIZATION DISCONTINUED IN NEW YORK.—We learn that in the case of the boy who was supposed to have been bitten by a rabid dog, Dr. Mott has discontinued his inoculations on account of the state of nervous agitation which they excited in the subject.

NOTES AND QUERIES.

THE EFFECTS OF ATROPINE AND WHISKEY IN A CASE OF CARBOLIC-ACID POISONING.

TO THE EDITOR OF THE PHILA. MEDICAL TIMES:

On May 4 I assisted Drs. Fowler and Potter, two well-known physicians of this city, in a perineorrhaphy, the laceration involving the sphincter ani and about two inches of the recto-vaginal wall. The patient, Mrs. L., was a lady 22 years of age, well nourished, quite obese in fact; had been married three years, but had given birth to but one child,—eighteen months previous to date of operation, at which time the laceration occurred. The results of the operation were perfect, and on May 12 we visited our patient for the purpose of removing the sutures. When within a short distance of the house we were met by a sister of the patient, who informed us that the nurse, by mistake, had given the "wrong medicine," and on reaching the house we were told that the nurse had intended giving the patient a tablespoonful of a mixture of potassium bromide, but instead of this had given a tablespoonful of pure carbolic acid. The mother, seeing a mistake had been made, seized the spoon and placed it to her lips to make certain as to what had been given; the result was considerable excoriation of lips and tongue. When we reached our patient, within ten minutes of the time when the dose had been taken, she was unconscious, cyanotic, almost pulseless, respiration rapid and irregular, with mucous râles throughout both lungs. The mother had given her several ounces of olive oil. We felt the case to be hopeless, but, more to satisfy the friends than from any expectation of favorable results, we administered by hypodermic injection two minims of sol. atropiæ (gr. iv to ℥i) and two drachms of whiskey. Within ten minutes of the time the injections were given the pulse and respiration had improved decidedly, and the constitutional effects of the atropine were marked. In half an hour the patient became conscious, vomited freely, with hæmatemesis. Milk was given in teaspoonful-doses at short intervals. Injections of brandy were continued, and later in the evening another dose of atropia. No saccharated calcium was used in the case.

By the afternoon of the following day Mrs. L. had so far recovered that we decided to remove the stitches, and, aside from the soreness of the mouth, some diarrhœa, and more or less pain in stomach and intestines (which was easily controlled by morphine), no unpleasant symptoms manifested themselves. The carbolic acid was freely eliminated by kidneys and skin, the discoloration of the urine and odor of the perspiration being noticeable for several days. Within three days the patient was sitting up, and is now entirely well.

Yours, etc.,
S. E. BASCOM.

SALT LAKE CITY, UTAH, May 20, 1886.

LARGE TUMORS AND GAS.

DEAR MR. EDITOR,—I have been much interested in reading the accounts of the very large tumors, some of which have lately been extracted, as the dentists say, with *gas*. In my elegantly-appointed private hospital (terms reasonable, circulars sent on application) I also extract with *gas*. On one occasion a very grievous accident happened to a patient, a lady of wealth and great refinement. After having extracted a truly enormous tumor, weight, with contents, guessed at, or, rather, accurately estimated at two hundred pounds, I directed my assistants to place the patient in bed. Having replaced my instruments in my case, I went to the bed to examine the patient, and was somewhat astonished to find that my assistants had mistaken the largest portion of the patient, which was the tumor, for the patient, and placed it carefully in bed, surrounded with bottles of hot water. The patient, weighing but a few pounds, was found in a tub in the yard swimming about in the contents of her own tumor.

My Extracting Hospital is in good condition, and well provided for the extraction of tumors of all kinds.

Very truly yours,
SIMKINS, M.D.

P.S.—The *contretemps* reported above is not likely to occur again, as the assistants were at once discharged.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM JULY 18, 1886, *TO JULY* 31, 1886.

COLONEL GLOVER PERIN, ASSISTANT SURGEON-GENERAL.—Leave of absence extended one month. S. O. 165, A. G. O., July 19, 1886.

COLONEL JOSEPH B. BROWN, SURGEON.—Retired from active service July 26, 1886. S. O. 171, A. G. O., July 26, 1886.

MAJOR J. R. GIBSON, SURGEON.—Ordered from Department of the East to Department of Missouri on expiration of leave of absence granted in S. O. 158 (c. s.), A. G. O. S. O. 168, A. G. O., July 22, 1886.

MAJOR EDWIN BENTLEY, SURGEON.—Ordered for duty as post-surgeon, Fort Davis, Texas. S. O. 92, Department of Texas, July 22, 1886.

MAJOR WILLIAM H. GARDNER, SURGEON.—Granted four months' leave, to take effect August 10, or as soon thereafter as his services can be spared. S. O. 165, A. G. O., July 19, 1886.

MAJOR M. K. TAYLOR, SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 77, Department of Missouri, July 24, 1886.

MAJOR PASSMORE MIDDLETON, SURGEON.—Ordered to the Department of the East from Department of Missouri. S. O 168, A. G. O., July 22, 1886.

MAJOR CALVIN DE WITT, SURGEON.—Assigned to duty at Fort Sully, Dakota. S. O. 66, Department of Dakota, July 14, 1886.

CAPTAIN JOHN M. DICKSON, ASSISTANT-SURGEON.—Ordered from Alcatraz Island, California, to Fort Mason, California.

CAPTAIN JOHN J. COCHRAN, ASSISTANT-SURGEON.—Ordered from Fort Mason, California, to Presidio of San Francisco.

CAPTAIN A. J. GIBSON, ASSISTANT-SURGEON.—Ordered from Fort Winfield Scott, California, to Alcatraz Island, California, on return from leave of absence. S. S. 56, Department of California, July 8, 1886.

CAPTAIN JOSEPH B. GIRARD, ASSISTANT-SURGEON.—Granted leave of absence for three months, with permission to go beyond sea. S. O. 170, A. G. O., July 24, 1886.

CAPTAIN SAMUEL Q. ROBINSON, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort Brown, Texas. S. O. 92, Department of Texas, July 22, 1886.

CAPTAIN J. J. KANE, ASSISTANT-SURGEON.—Ordered from Fort Ringgold, Texas, to Fort Hancock, Texas. S. O. 85, Department of Texas, July 13, 1886.

CAPTAIN WILLIAM F. CARTER, ASSISTANT-SURGEON.—Ordered from Fort Concho, Texas, to Fort Ringgold, Texas. S. O. 85, Department of Texas, July 13, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM JULY 24, 1886, *TO JULY* 31, 1886.

PASSED ASSISTANT-SURGEON G. P. LUMSDEN.—To duty at Marine Barracks, Washington, for the month of August.

ASSISTANT-SURGEON F. J. B. CORDIERO.—Ordered to Receiving-Ship "Minnesota."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE TWO WEEKS ENDING JULY 31, 1886.

CARMICHAEL, D. A., PASSED ASSISTANT-SURGEON.—Granted leave of absence for thirty days, July 24, 1886.

MAGRUDER, G. M., ASSISTANT-SURGEON.—To proceed to Cairo, Illinois, for temporary duty, July 22, 1886.

LONG, W. H., SURGEON.—Granted leave of absence for fifteen days, July 30, 1886.

SAWTELL, H. W., SURGEON.—To proceed to Portland, Oregon, and Port Townsend, Washington Territory, as inspector, July 29, 1886.

DEVAN, S. C., PASSED ASSISTANT-SURGEON.—Granted leave of absence for ten days, July 26, 1886.

FATTIC, J. B., ASSISTANT-SURGEON.—Granted leave of absence for twenty-nine days, July 26, 1886.

PHILADELPHIA, AUGUST 21, 1886.

ORIGINAL COMMUNICATIONS.

FRACTURE OF THE BASE OF THE CRANIUM.*

BY FREDERICK HYDE, M.D.,

Cortland, New York.

FRACTURE of the base of the skull, under its most favorable conditions, is always a grave injury. This lesion may occur when no fracture exists in any part of the cranial vault. The base may be fissured extensively without marked displacement. The fracture may involve one or both tables of the bone. It is well known that the prognosis in fracture of the skull is unfavorable in proportion to the greater extent of intracranial textures involved.

When the general and minute anatomy of the basilar structures are in the surgeon's mind, he realizes why it is that fractures occurring here are so often attended with fatal results. The contiguity of some of the most important cerebral tissues both in function and structure, and the inaccessibility of basal fractures to surgical treatment, are conditions which we think too often lead the surgeon to declare that their treatment is scarcely palliative. If we keep in clear view the relation of the textures involved in the lesion under discussion, we shall see both its diagnostic and prognostic significance.

We will note a few anatomical facts connected with the cerebral surface of the cranial base, as a needful preliminary to a better understanding of its lesions.

First, a brief anatomical reference to the three fossæ of each side of the base.

Some of the anatomical tissues of these fossæ are common to the three, while some are peculiar to each both in size, form, structure, and office. The anterior fossa has its own sutures,—viz., the ethmoido-frontal, ethmo-sphenoidal, and fronto-sphenoidal,—and holds the anterior lobe of the cerebrum.

It shows, in the median line from before backward, the beginning of the groove for the superior longitudinal sinus; here, too, is the olfactory groove, closely adapted to the bulb of the olfactory nerve; on the outer side of each olfactory groove are the openings of the ethmoidal foramina. In this fossa will be seen laterally the eminences and depressions for the convolutions of the brain, and grooves in which rest the anterior meningeal arteries.

The middle fossa varies slightly from the other two: in its boundaries it is related to the sphenoid, the anterior margins of the optic groove, behind by the upper border of the petrous portion of the temporal, and the basilar suture; outward by the squamous portion of the temporal and anterior inferior angle of the parietal bone. In this fossa, too, are the squamous, spheno-parietal, spheno-temporal, and petro-sphenoidal sutures.

In this part of the base is the optic groove, supporting the optic commissure, ending in the optic foramen, in which are the optic nerve and ophthalmic artery. Here are the folds of the dura mater which make the cavernous sinus. In this sinus are the internal carotid artery and the nerves of the orbit. Here are eminences and depressions for the middle lobes of the brain, and grooves for the branches of the middle meningeal artery, which divides on the outer side of the foramen spinosum into two, anterior and posterior, the anterior going to the inferior angle of the parietal bone, the other passing upward and backward.

In this part of the base are situated foramina, as the foramen lacerum anterius, for the passage of the most important nerves, as the third, the fourth, the three branches of the ophthalmic division of the fifth, the sixth, and the ophthalmic vein. Next come the foramen rotundum and foramen ovale, also transmitting important nerves and vessels.

The third or posterior fossa, the largest of the three, and situated on a lower level, is so placed and is so filled with important structures as to render basal fractures more perilous to life in this location than in any other part of the skull. Its formation involves the occipital, petrous and mastoid portions of the temporal, and the posterior inferior angle of the parietal bone. This fossa is crossed by three sutures, and lodges the cerebellum, pons Varolii, and medulla oblongata. In its centre is the foramen magnum, behind which is the inferior occipital fossa, which

* Read before the Second Annual Meeting of the New York State Medical Association, Third District Branch, held at Binghamton, New York, June 17, 1886.

holds the hemisphere of the cerebellum. Here also is seen the place for the falx cerebelli and the occipital sinus.

It will be seen by this reference to the basilar anatomy of the skull that it would be exceptional should a fissure or fracture occur in the base with the least displacement of fragments, especially of the inner table, from its immediate proximity to vital tissues, without giving rise to a most formidable lesion either directly or indirectly.

This would hold true of either fossa. Here is an instance where the slightest injury may arrest function of a vital texture. A fissure here can scarcely exist without producing from the slightest to the most extensive disruption of the dura in its linear track. Such a lesion may possibly for a time be unattended by symptoms; but sooner or later signs of intracranial morbid disturbance will appear.

We have said that a fissure in this region would be followed by some disruption of the dura-matral tissue at the site of the lesion, which may be expected to prove its existence in a short time by the occurrence of cerebral symptoms.

It should be remembered that direct leakage of blood or serum or both, be it never so slight, cannot remain here without causing pressure on tissues which will not tolerate it safely, and so in the later exudative products of inflammation. Is it said that fissure of any part of the base of the skull is a harmless lesion? This may be true in some rare examples, when it is restricted to the superior part of the vault, but our observation is that in fissure of the basilar portions, or in cases where the fissure extends from the vault into the base, earlier or later it is followed by morbid cerebro-meningeal processes.

In proportion as the fissure approaches the base, as in fracture of one or both tables, with much or little displacement of fragments, is the prognosis more unfavorable. Frequently these fissures and fractures involve the sutures at varying angles as well as in the line of their dentation, and a fissure here, with more or less lesion of the lining of the bone, is often attended with more grave results than the same extent of this injury in the coronal parts of the skull.

These injuries often implicate textures in which are nerves of special sense, either at their origin or in their course, shown by complete loss of vision, oftener in one eye than in both; in our records also occur instances of total deafness in one ear, loss of smell, impaired deglutition and speech.

I do not believe, as claimed by some surgeons, that fracture of the base is always attended by fissuring of the vault. They may coexist, as already stated, but it is equally true that the lesion in question does exist when there is no fissure in the vault.

In fissure of the outer table, without immediate symptoms of deeper lesion, it has resulted more than once under the writer's eye that fracture of the inner table existed with displacements of fragments followed by cerebral symptoms and death of the patient, as appeared from the autopsy.

Fissure of a cranial bone may exist and be followed by good repair, but our point is that if fissure exists in any part of the skull, especially in its base, it should be carefully watched, so that at the first appearance of intracranial symptoms the question of operation might be at once considered. We repeat, that fissure of the base at any point is more liable to be accompanied with serious lesion than when restricted to the vault alone.

We concede that fracture of the inner table alone is of rare occurrence; but that it does result from or is connected with fissure of the outer table, and that of multiple form, has been abundantly shown in the autopsies of patients dying of fracture of both the base and the vault.

Fractures of the base are caused by either direct or indirect force. Among the direct are punctured wounds made by pointed instruments and such as are conically shaped. These may puncture the skull in the upper part of the orbit or through the nose.

A strong blow upon the under part of the chin may drive up the condyles of the jaw so as to puncture the glenoid fossa. Two examples of the latter came under the care of the writer. In three other instances of our observation, blows received upon the nose fractured its bones, comminuting also the cribriform plate of the ethmoid bone. The fragility of these, as well as of the body of the sphenoid, favors their ready fracture.

Our own records show a larger number of these fractures caused by both direct and indirect application of force, as when the patients were thrown from carriages while in rapid motion, falling, too, from elevated situations, striking upon the side

of the head, or upon the upper part of the vault. Our records remind us of three examples of this fracture caused by the falling of the patients from a height, one striking upon the lower part of the body, and another jumping from a building, striking directly upon both feet, with his body erect at the time. In these examples the lesion was indirectly produced. Several examples from our notes show that they were caused by the kick of a horse, in one of which the force was received behind the upper part of the ear, as well as quite above and in front of the latter, with only contusion of the scalp, without crepitation or displacement of the external table.

Again, in a more direct way, the kicking and stamping of a horse upon the upper part of the head has produced compound comminuted fracture, the latter being most extensive in the inner table.

A healthy man, aged 40 years, was thrown from a sleigh while the horses drawing it were running in fright down a steep hill. He was taken up and carried to a near house while insensible. He was seen immediately by a surgeon, who reported his case as follows. There was no external injury of the scalp nor of the bones of the vault to be detected, nor any other bodily injury; he was unconscious still; pulse 90, feeble and unsteady; temperature sub-normal; both pupils dilated; feeble, sighing respiration. On the second day his pulse was 80, and fuller; temperature 100°; breathing slower and louder; involuntary discharge of urine; deglutition impossible. This is the history of the case up to the beginning of the third day, when I first saw the patient. Within the last six hours the temperature had arisen to 103°; respiration unsteady, abnormally slow, and then hurried. Diagnosis: basilar fracture of the skull. The patient remained unconscious; respiration alternately slow and quick; enemata in the rectum were not retained; no fæcal discharge from the intestinal canal; no discharge of urine for the last day; the patient dying a little more than five days from the receipt of the injury.

Autopsy six hours after death. Thinly-diffused pericranial coagula were found over the superior anterior part of the right parietal bone, and a larger blood-extravasation between the bone and dura corresponding to the site of the pericranial bleeding; near the centre of the right middle cerebral lobe was a coagulum more than half an inch in extent; at the base of the opposite middle cerebral lobe was a small blood-clot; the right lateral ventricle contained a half-drachm of bloody serum.

A little under the clot of the dura mater was an effusion of bloody serum into the arachnoid sac for considerable extent. The lesions of bone were two fissures: one beginning at the superior and posterior part of the right parietal, the other at the anterior upper part of the occipital bone; the first terminating in the middle of the right cerebral fossa, the second reaching the posterior part of the same fossa, and in the line of each fissure were thin, narrow coagula.

Careful examination revealed minute contusions, more plainly visible in the middle cerebral lobe on the right side. A fracture was found running transversely through the floor of the right fossa, with displacement of one-eighth inch, with several small spicula of the inner table, three of which were piercing the dura-matral tissue.

In eight cases of autopsy by the writer of the fracture in question, the degree of displacement of fragments was nearer alike than lesions of the inner tissues. In all but three examples the bony displacement was so slight as to have been overlooked but for a careful, minute dissection; but in these there was scarcely an exception in the line of the fissure, from the smallest to a larger disruption of the soft tissue, over and along the linear track.

The examples of greatest displacement involved the temporal and occipital bones in their basilar portions: in the former were three fragments, in the latter two, the greatest displacement being in the temporal.

This exemption from displacement is restricted to the lesion when more distinct from fractures of both the vault and base combined, as seen in the examples produced by great crushing weight upon the head, resulting in extensive displacement of fragments both of the vault and base.

In searching for the symptoms of basal fracture, there being so little displacement of fragments (especially in the cases from indirect force), the signs detected by the touch or vision are less positive than accompanying fractures of the vault. While

we are to depend in part upon rational signs, there are a few visible symptoms. No one of these is more reliable than bleeding from the ear, persistently followed later by a steady aqueous discharge.

Hemorrhage from the nose and from the pharynx is also present in this fracture in some cases. The value of persistent bleeding from the ear, as well as the watery discharge later, and in some degree the same from the nose, is in the evidence they furnish of lesions within the cranium that allow these discharges to find their outlet through the natural passages, and in rare instances a discharge of brain-substance, as has been witnessed by the writer, from the nose.

Orbital ecchymosis soon after the receipt of an injury upon the head may be considerable, and not necessarily evidence of basal fracture unless persistent with the symptoms of intracranial lesion. This form of bleeding, with a later subconjunctival effusion, would more likely indicate that a fracture, if any, was in the anterior basal region.

Fracture of the orbital plate of the frontal bone may exist without signs of extreme hemorrhage, for the evidence of basal fracture may be strong in its absence. Following at once, a free bleeding from the mouth after an injury upon the head cannot be evidence of fracture of the base in the absence of other symptoms. This would be true, too, of bleeding from the nose, but when associated, if not primarily with the supervention of cerebral symptoms, with a watery leakage, it would be quite certain that a basilar lesion existed.

Early continuous bleeding from the ear in from three to four days after the receipt of the injury is the most reliable symptom of fracture of the base, when attended with cerebral symptoms.

Under our observation, a freer bleeding at first, ceasing within a few hours, is a less positive sign of fractured base than when the bleeding is more moderate at first, but continues steadily for a longer time. In our record of twenty-two cases of this fracture, three of the recoveries bled moderately from the ear for seven days, followed in two of them by an aqueous discharge from four to five weeks.

The situation and course of the fracture will determine the tendency to hemorrhage: when it traverses the petrous bone it would be likely to be profuse, and yet, in an instance of fracture of this bone which proved fatal, the bleeding was free at first, but soon became moderate in quantity. The line of fracture was shown in the autopsy.

How far is a watery discharge from the ear coming on from three to four days after the receipt of the injury, where there has been no bleeding from the ear, a sign of this fracture? With cerebral symptoms, it would be as reliable as bleeding alone. How often in recoveries from this lesion in which there was early bleeding from the ear, ceasing in two or three days, has a watery discharge followed? We answer, in three out of five in our cases.

Keeping in mind the anatomy of the base, especially of its foramina, it follows that nerves passing these are often paralyzed in this fracture, and this is to be regarded as a symptom of importance.

One or more of the symptoms noted bear directly upon the diagnosis of basal fracture. It should be kept in mind that these fractures come largely of diffused force, identified with vibratory impulse, in examples free from all signs of external injury, but among these conditions is early concussion, while a little later compression is marked.

It should be kept in mind that some of these cases are identified with radiating fissure of the vault, and as these reach the textures of either basilar fossa they will cause lesions of their contents, producing symptoms of which we have spoken, and thus are all factors of diagnostic significance.

The prognosis in this fracture, which generally is unfavorable, will depend, as in fractures of the vault, upon the extent and kind of intracranial tissues involved. Were it the rule that displacement in basal fractures approximated in a small degree that which belongs to the average of vault-fractures, it would leave the prognosis of every case unqualifiedly bad.

It is held by some surgeons that the longer the bleeding or the aqueous discharge continues from the ear, the more unfavorable is the prognosis; and, again, it is declared that when these discharges are blended in the same case, it is a fatal symptom outright. We have said that both bleeding and the discharge from the ear of an aqueous fluid, under certain qualifications, are reliable diagnostics of the grave lesion in question.

In the clinical history of my own cases

are two examples in which recovery took place, in one of which the aqueous running continued three months, in the other after a daily discharge for four months there was a recurrence at intervals of from two to three and four days, when it stopped at the end of four months and a half from the receipt of the injury.

In the former patient the recovery was complete, with the exception of profound deafness in the right ear; in the latter the physical recovery was good, except total loss of sight in the right eye, with lasting weak-mindedness.

Having always before us the anatomical structures, with their physiological offices, involved in this form of fracture, with the little displacement of bone-fragments, the recovery of cases under my own eye leads me to believe that the prognosis is more favorable than the opinions of some surgeons would warrant.

Treatment.—Considering the average of the more strictly basal form of the lesion we are considering, the immediate concussion, which means cerebral contusion alone or combined with positive signs of brain-pressure, requires the more immediate care of the surgeon, bearing in mind that these examples do not all prove fatal, therefore they should be treated as in vault-fractures in which there is slight if any displacement of bone.

In the examples combining vault- and basilar-fracture in which there are multiple fragments with more or less displacement, especially in the latter, when they are driven through the dura mater, lodged in the cerebral tissue low in the temporal and occipital regions, and they cannot be removed without the trephine, it should be applied as low as the basilar portions of the bones, as a less risk than leaving what is now so much foreign material—as the fragments of bone, torn membranes, and cerebral tissue—soon to take on pathological changes. In my own record of cases is an example of compound multiple fracture involving the middle inferior portion of the right temporal bone and right lateral inferior part of the occipital bone: the patient, a middle-aged strong man, with marked symptoms of compression of brain; temperature 103°; pulse strong and 55; contused lacerated wound of scalp on the right side of the head, anterior to the upper part of the ear, with crepitation to light touch; the patient unconscious.

These were the conditions first seen by the writer at the end of the fourth day of the injury, caused by the kick of a horse. Diagnosis: fracture of the inferior part of the vault, reaching the base. Treatment: enlarging the wound, when three fragments were detected, two of which were an inch in size, the third half as large; the anterior involved a portion of the lower middle part of the parietal, the remainder was a part of the petrous bone; the smallest and lower one came from the parietal; the other large fragment embraced a small part of the posterior inferior parietal and the anterior and lower part of the occipital bone.

With care, the two anterior fragments were removed by traction, but the third more basilar one was so firmly locked that it could only be removed by taking out a small crown-piece with the trephine. The abundant coagula with the small spicula from the inner table were removed, and the wound dressed. At once, after the removal of the occipital fragment and blood, the breathing was less stertorous, and the pulse rose to 80, but with no return of consciousness, the patient dying six hours after the operation. No other lesions were detected. There was no autopsy.

I have given the clinical details in this instance to show that no special hindrance was met in applying the trephine so near its basilar portion, and in removing the entire mass of foreign material causing immediately the grave symptoms of pressure in this case.

Should not this operation have been made at once after the receipt of the injury in the presence of such profound symptoms of cerebral pressure?

We submit a few points suggested in the paper just read.

First. The anatomy and physiology of the base of the skull render its fracture more fatal, independently of their inaccessibility to direct surgical treatment, than when the lesion is restricted to the cranial vault.

Secondly. The symptoms determining the diagnosis in basal fracture are caused by meningeal and cerebral lesion involving the origin of nerves or their continuity, often both, as well as lesion of blood-vessels.

Thirdly. While the displacement of fragments in this fracture is but little in the majority of cases, it will be more in

the minority; and it is not uncommon, when the displacement is not detected in the outer table, that the inner will be comminuted and the fragments lodged in the subcranial tissues, with blood-extravasation.

Fourthly. In the majority of examples of this fracture the symptoms of cerebral pressure are plainly marked; if not early, they appear only a little later, and yet so early as to prove that they are the immediate result of the injury, rather than from inflammatory products which appear later.

Fifthly. When the fracture involves the lower part of the parietal bone and the temporal with its petrous portion if compound, or only contusion of the part receiving the blow or force with marked symptoms of this fracture, an incision made at or over the site of the bruised scalp will aid in detecting the extent of the injury.

Sixthly. If fragments of bone or blood can be reached, remove them; and if there be slight or greater displacement, with positive symptoms of pressure which cannot be removed, then apply the trephine, elevate the depressed bones, and if there be blood, remove it.

Seventhly. In this fracture, when caused by the direct application of force, as may be in the frontal sinus and in the proximity of the base of either fossa, with positive symptoms of brain-pressure, the hopeless condition of the case left to the expectant treatment, if there be no opening through the soft coverings of the bone at the point receiving the injury, warrants making an incision for exploration, that its cause may be better defined, and if it cannot be removed without, then use the trephine.

Eighthly. In all cases, if the operation of trephining is to be made, it should, as in vault-fractures, be done at once after the receipt of the injury, to shorten the time of pressure upon vital textures, and before inflammation has occurred.

REPORT ON THE PROGRESS OF DERMATOLOGY.

BY ARTHUR VAN HARLINGEN, M.D.

(Continued from page 821.)

PART II. THERAPEUTICS.

HYPERIDROSIS.—The German army surgeons recommend an ointment composed of two parts of pure salicylic acid to ten parts of the best mutton suet for the benefit of soldiers suffering from sweating feet or soreness in riding.

TINEA TONSURANS.—The formulæ for the treatment of this affection show no sign of diminution in number. New ones appear in the journals almost weekly. We give a selection.

Harrison recommends the application of the following solution to the closely-clipped scalp at the points affected:

℞ Potassii iodidi, ℥ss;
Liq. potassæ, f℥j. M.

This should be sopped on with a pledget of lint once daily, and when dry the following solution should be applied at the same points:

℞ Hydrarg. bichlor., gr. iij;
Aquæ, f℥j. M.

The theory is that the liquor potassæ dissolves the fatty matter on the surface, and permits the penetration of the iodide of potassium into the follicles. Here it is reached by the bichloride of mercury; a double decomposition takes place, and iodide of mercury is found just where it is wanted as a parasiticide. We fear, however, that this very ingenious compound application would be found to fail in practice.

A somewhat similar preparation is the following:

℞ Hydrarg. chlor. miti, ℥j;
Tinct. iodini, f℥j. M.

Let it stand a few days, shaking frequently. Paint on with a brush. One or two applications, it is said, will suffice, so that this remedy is easily applied.

The following is an old friend in a new combination:

℞ Thymol, ℥j;
Chloroform, f℥ss;
Ol. olivæ ad f℥ij. M.

Sig.—Apply with a camel's-hair brush, after cleansing the part well.

The following is said to be a cleanly and efficient remedy in ringworm of the thigh:

℞ Acidi salicylici, gr. l;
Ichthyolici, ℥iss;
Alcoholis, f℥j. M.

Rub in with a stiff brush twice daily, and afterwards dust with starch.

SCABIES.—Comessati recommends the following ingeniously conceived treatment:

A solution is prepared containing four ounces of hyposulphite of sodium in one

pint of water, and the whole body is washed with this in the evening. Next morning the skin is sponged with dilute hydrochloric acid, one ounce to the pint of water. Sulphur, sulphurous acid, and chloride of sodium are formed, and the disease, says Comessati, is in most cases cured by a single application. Let those who are taken with subtly-conceived pharmaceuto-chemical decompositions pin their faith to this. The reporter has given this treatment a fair trial in one well-marked case of scabies, and has found no improvement in a week's treatment, when naphthol subsequently proved effectual after a few applications.

Lactic Acid for the Destruction of Pathological Tissues. — Mosetig-Moorhof (*Cbl. f. Chir.*, No. 12, 1885) found that concentrated lactic acid applied to fungous granulations reduced them to a blackish mass. This led him to try experiments in the treatment of other new growths, in which he found that this caustic would destroy the new growth while leaving healthy tissues intact.

The lactic acid is applied upon bits of lint or absorbent cotton (care being taken to wipe the surrounding tissues dry) and covered with waxed paper, which is then bound down upon the spot. Another mode of application is in the form of a paste made by the addition of silicic acid, which is spread upon the diseased part to the thickness of about one-sixteenth of an inch. After twelve hours the application is removed and the wound cleansed with pure water. After twenty-four to forty-eight hours' rest to prevent too severe inflammation, the caustic application is renewed. The caustic is not particularly painful. Five to seven applications were enough to destroy and heal a lupus. Mosetig-Moorhof recommends the treatment in lupus vulgaris, fungous growths of the skin, rodent ulcer, and papilloma. The great advantage claimed for lactic acid is that it spares healthy tissues, unlike the ordinary caustics, which destroy friend and foe alike.

Eczema and so-called Eczema of the Nasal Openings.—Lublinski says that two distinct processes occur in this region which are often confounded with each other. One of these is sycosis affecting the hair-bulbs about the nostrils, or inflammation with suppuration of the follicles. This form is naturally most common in the male sex, but is also met with in women and children. From the introitus the eruption may spread up the mucous membrane and also upon the neighboring skin. The second form is purely eczematous: the incipient stage of this can be observed after almost any severe "cold in the head." The treatment consists in the removal of all crusts and the application of ointments smeared over cotton plugs, which are inserted into the nostrils. In sycosis our author recommends the following:

℞ Hydrarg. precip. alb.,
Bismuth. subnit., āā gr. xv;
Vaselini, ʒiiss.

Sycosis of the nose, he says, can be healed in from eight to fourteen days by this method.

In acute eczema anything like overstimulation is to be avoided. The tampons of cotton are in such cases to be smeared over with the following ointment:

℞ Bismuth. subnitrat.,
Pulv. zinci oxidi, āā gr. xxx;
Vaselini, gr. cc. M.

In scrofulous children cod-liver oil or syrup of the iodide of iron is given internally.

Eczema of the Scalp.—Borax, says Deligny (*L'Eczema*, Paris, 1885), is the best application in scaly eczema of the scalp, not only in cleansing the head, but in arresting the desquamation. Michele recommends:

℞ Sodii biborat., gr. cl;
Alcoholis,
Aquæ rosæ, āā fʒiv. M.

Boric vaseline is an excellent preparation which is often employed at the St. Louis Hospital:

℞ Pulv. acid. boric., ʒiss;
Vaselini, ʒj;
Bals. Peruv., gr. viij. M.

Besnier applies two or three folds of thin muslin wet with starch-water, a teaspoonful to the quart of water, and covers this with a rubber cloth in crusted eczema of the scalp. If there is fœtor, he adds seventy-five grains of boric acid to the quart of water. When all inflammation has disappeared, he recommends the addition of fifteen grains of sulphate of copper to the quart, to be used with discretion.

Resorcin in Skin-Diseases.—Ihle (*Monatshefte f. Prakt. Derm.*, December, 1885, p. 425), after criticising the indiscriminate manner in which this remedy was for a time lauded, and alluding to the undeserved oblivion into which it seems of late to have fallen, recommends it highly in tinea circinata and tinea sycosis. He uses the following paste:

℞ Resorcin purissim., gr. xl;
Vaselini albæ, gr. cc;
Pulv. zinci oxidi,
Pulv. amylis, āā gr. c. M.

This forms a paste. If the percentage of resorcin is increased, that of the oxide of zinc and of the starch must be diminished, as in the following formula:

℞ Resorcin purissim., gr. cc;
Vaselini albæ, ℥iv;
Pulv. zinci oxidi,
Pulv. amylis, āā ℈iv. M.

A little carmine may be added to give the paste a flesh tint, because the ointment otherwise gives a blue color to the skin.

This paste of resorcin should be employed weak at first, and in gradually-increasing strength as the patient is found to bear it. It is painted on the skin in successive layers every day or so, the hair of the beard being cut close, but not shaved. If we understand Herr Ihle correctly, it must not be washed off; certainly not until absolutely required.

Ihle has also used this remedy with success in other vegetable parasitic diseases. Any one who finds himself short of remedies for these affections may add resorcin to his list.

The following formula is recommended in "seborrhœa" with falling of the hair (our pityriasis):

℞ Resorcin, gr. x–xv;
Olei ricini, f℥iss;
Alcoholis, f℥v;
Bals. Peruvian., gr. j. M.

Sig.—Rub into the scalp daily with a bit of flannel.

Ihle has noticed that under the use of this application not only the hair ceases to fall out and becomes more and more thick, but that the annoying pruritus ceases at once.

In condylomata acuminata a fifty- to eighty-per-cent. ointment of resorcin applied daily will by the end of the third day give a white surface, which indicates a superficial necrosis, and can be scraped away in a tolerably thick layer. The operation can then be repeated, and it will be found that even large cauliflower-growths are quickly and painlessly removed by this method. The tendency to relapse remains, however, and must be combated by the application of weaker ointments (five to ten per cent.) of resorcin.

In long-continued applications it is desirable to protect the neighboring skin, as resorcin has an irritating effect after long use.

Ihle has observed toxic symptoms from absorption in only a single case. This was that of a little girl three years of age, in whom after a single application of a five-per-cent. ointment to the scalp somnolence was produced. This disappeared, however, in the course of the treatment. Ihle has never observed toxic symptoms in the adult, even when concentrated resorcin ointments have been applied for some time over large areas.

Pyrogallic Acid in Dermatology.—Allen (*Jour. of Cutan. and Venereal Dis.*, 1886, p. 8) gives a résumé of our knowledge of the use of pyrogallic acid in skin-diseases. In lupus vulgaris Besnier applies a saturated solution of the acid in ether or a spray of the same. This he covers at once with a gutta-percha solution. The applications are to be repeated until all lupus-points have disappeared from the cicatrix. The acid, as is known, attacks the diseased tissues by preference, sparing the normal and cicatricial tissues.

In a case of tylosis of the feet with deep cracks and a villous condition of the epidermis, Allen applied a solution of pyrogallic acid in liquor gutta-perchæ, one drachm to the ounce, with very good effect.

Occasionally pyrogallic acid may produce toxic symptoms, though no such cases have been reported in this country. The symptoms of poisoning by pyrogallic acid are detailed by Allen, who goes on to say that now and then pyrogallic acid may produce a severe local effect on the healthy tissues themselves, causing sloughs and ulcerations. Occasionally after using pyrogallic acid for some time, much pain is complained of, and the tissues become inflamed. It is always well in this event to cease its application for a time and substitute some bland ointment.

Pyrogallic acid should never be com-

bined with an alkali, which would neutralize it; nor with a metal, which it would reduce. Vaseline is the best excipient. When the animal fats are employed, the ointment should be put up in small quantities, as decomposition soon ensues. Allen also uses in psoriasis a collodion containing forty grains of pyrogallic acid to the ounce, with eight to ten drops of castor oil.

Treatment of Erysipelas.—At a meeting of the Clinical Society of the New York Post-Graduate School (Quarterly Bulletin of the Society, New York, 1885, p. 74), the subject of erysipelas being under discussion, the following forms of treatment were recommended by various practitioners.

Dr. Partridge thought the best treatment was general support and stimulation, constitutional symptoms being treated as they arise. A saline cathartic may be employed, with local depletion of the blood-vessels to relieve tension where it is great, and quinine when the temperature runs high. He considered abortive and specific treatments useless.

Dr. Roosa considered the antipyretic use of quinine useless and dangerous. He would use no medicine but a purgative if necessary, relying on good air, food-stimulation, and attention to the comfort of the patient. Locally he would use the lead-and-opium wash.

Dr. Seneca D. Powell was in the habit, if the patient had a full, bounding pulse, of giving the following:

℞ Liq. ammon. acetatis, f℥j–iv;
Spirit. ætheris nitrosi, f℥–iij;
Tinct. aconit. rad., gtt. j–iij.

To be taken every two hours.

Instead of the officinal tincture of iron, which contains both nitric acid and water, he uses the following, which contains neither:

℞ Ferri oxidi nigri, ptes iij;
Acid. hydrochloric., ptes x;
Alcoholis, ptes xxx. M.

In debility, alcohol freely. Locally lead-and-opium wash applied hot, and the compresses covered with oiled silk. If this does not relieve the inflammation, heat applied by hot bran bags.

Dr. Von Ramdohr had seen the progress of the erysipelatous blush apparently checked by the injection of a three-per-cent. solution of carbolic acid into the sound tissue near the margin of the disease. Sixteen injections were made, and, though very much reduced at the time, the patient recovered.

Dr. Leszynsky had seen a case of facial erysipelas in which the compound tincture of benzoin applied locally as a means of limiting the disease had seemed to have a good effect.

Dr. F. B. Carpenter considered aconite abortive in the sthenic variety.

Dr. H. G. Lyttle uses iodoform and collodion, a drachm to the ounce, as an external application. In erysipelas of the scalp in children he had made use of the white-lead paint, which undoubtedly relieves the irritation and scratching, while the spread of the inflammation is checked.

Dr. C. H. Brown uses the following—

℞ Camphor, ℥iij;
Tannin, ℥ij;
Ether, ℥j. M.

—as a local application, and thought that when the part is freely painted with it, it limits the disease and relieves the pain.

Dr. John H. Nesbit said that tincture of the chloride of iron is of invaluable service in simple facial erysipelas, but in the other forms it does more harm than good, invariably inducing disturbances of digestion. Locally the most useful preparation is a wash prepared freshly from powdered opium, applied hot. A solution of nitrate of silver, half a drachm to a drachm to the ounce of water, stops the spread of the disease in every case, and is a very valuable remedy.

Dr. Satterthwaite uses collodion, painting a band an inch or two wide around the limb at some distance above the line of inflammation. After the first coating has dried, the operation is repeated three or four times, and the result is constriction of the integument, which appears to compress the superficial lymphatics and so limit the disease. For the phlegmonous form he uses olive-oil, rubbing it in every day.

Collapse after the Administration of Antipyrin.—A dose of thirty grains of antipyrin, followed three hours later by one of fifteen grains, led to fatal collapse in a woman suffering with hyperpyrexia after abortion. Blore, who reports the case, attributes the fatal result to the rapid decline in temperature. — *Wiener Med. Wochenschrift.*

THE OPHTHALMOSCOPE FOR THE GENERAL PRACTITIONER.

Read before the College of Physicians of Philadelphia, April 7, 1886,

BY EDWARD JACKSON, M.D.,

Chief of the Eye-Clinic in the Philadelphia Polyclinic.

THE want of a form of ophthalmoscope specially suited to the needs of physicians who do not make the objective measurement of refraction an important part of their professional work has been an obstacle to the more general practice of ophthalmoscopy. It is not my purpose this evening to announce the invention of an instrument to meet this want, but briefly to discuss and to incite to discussion of what should be the characteristics of such an instrument, that there may be better appreciation of a standard to guide practitioners in choosing among instruments now extant, and inventors among modifications that are possible in the future.

"The physician," says Hughlings Jackson, "is quite as much indebted to Helmholtz as the ophthalmologist." There is exaggeration in the statement; but under the exaggeration lies this truth: the physician's obligation to the inventor of the ophthalmoscope is great. How great we do not yet know; but some appreciation of it will be gained by a careful examination of such treatises as Gowers's "Medical Ophthalmoscopy," or Dr. William F. Norris's very condensed article on medical ophthalmology in Pepper's "System of Medicine." The direct value of the ophthalmoscope in the consulting-room has been strenuously insisted on and often illustrated. I will not dwell on it now; only let me remind you of the indirect importance of its use as a means of training eye and brain for diagnosis in general. All schemes of education recognize the high value of some studies as means of mental development and discipline. For training the powers of observation and reasoning that must ever characterize the acute diagnostician, I think the practice of ophthalmoscopy is unequalled. In it the student is incited to the certainty and exactness of microscopical research, yet must ever consider the personal diversities of patients. Then there is the wonderfully impressive character of the phenomena studied with the ophthalmoscope. In the words of Dr. Loring, "With it, it is like walking into Nature's laboratory and 'seeing the Infinite in action,' since by its means we are enabled to look upon the only nerve in the whole body that can ever lie open to our inspection under physiological conditions, and to follow in a transparent membrane an isolated circulation from its entrance through the arteries to its exit through the veins. We are further enabled to study daily, or even hourly, morbid processes in each and every phase." These morbid processes are not only important in themselves; they have their close analogues in every organ and in almost every tissue of the body. The value of this close study of pathology, of gaining insight, of getting into sympathy by close contact with natural processes, healthy and morbid, can hardly be overestimated. Well might the great German pathologist exploit the ophthalmoscope, and wish that the methods of ophthalmology might be adopted in other branches of medicine. I submit the proposition that the more general use of the ophthalmoscope would tend toward such a desirable advance.

The instrument suited for this general use must have *a few well-chosen lenses:* say, convex, one, two, three, and five dioptrics; concave, one, two, four, six, and ten dioptrics. Only these few are necessary. Higher degrees of hypermetropia are not common, and in such cases the fundus is readily examined either by using the accommodation or by withdrawing a little from the eye under observation; while higher degrees of myopia are best studied by the indirect method. Unnecessary lenses, besides adding to the weight, complexity, and cost of the instrument, constitute a real and serious obstacle to its use. Often the ophthalmoscopist sees by glimpses. The position of the light, the ophthalmoscope, and the observer's eye must be adjusted to the patient's position before the first glimpse can be obtained; and whenever the patient moves the process of adjustment must be repeated. If the process of adjustment be prolonged by the necessity of running through a long series of lenses to select the proper one, it may be scarcely completed and the first glimpse obtained before it has to be again repeated.

Now, by long and frequent practice it becomes possible to make these adjustments very rapidly and automatically, and

also to observe at a glance the condition of the parts under inspection, so that the ophthalmoscopist in constant practice finds the use of his instrument easy and satisfactory, even though it be of a somewhat complicated pattern. But the student or practitioner who has not this perfect familiarity with the process finds every additional difficulty of adjustment a very serious hindrance.

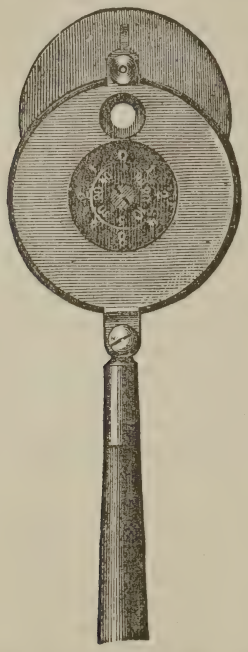
For this same reason it is highly important that the *lenses be most conveniently arranged*, so that the whole series is easily and quickly available when once the illumination of the fundus has been secured. They should be mounted in the Rekoss disk used in most refraction-ophthalmoscopes, or in slides such as I have proposed for the purpose (Trans. Amer. Ophthal. Society, 1885, p. 111). The choice and the arrangement of the lenses are the especially weak points in the Liebreich ophthalmoscope, with which probably more medical men have essayed the practice of ophthalmoscopy than with any other one form of instrument. It may not be without interest to mention that one of the first attempts to improve on the Liebreich was made in this city over twenty years ago. At the instance of Dr. Charles H. Thomas, through whose courtesy I am able to show this instrument, Queen & Co. modified the common Liebreich ophthalmoscope by mounting the mirror in a hard-rubber handle and placing the lenses in a revolving disk behind the mirror. This is of course practically the Rekoss disk, but in this case the name is inappropriate, for Dr. Thomas got the idea not from the work of the Dutch optician who seems to have immortalized himself by his addition to the ophthalmoscope, but from the revolving diaphragm-plate of his own microscope.

Another requirement is, *the aperture in the mirror should be small*, to lessen the circles of diffusion when ametropia cannot be exactly corrected, and especially to secure a sufficient illumination of the fundus through the undilated pupil. Our popular American ophthalmoscopes have a mirror-aperture of from three and a half to four millimetres. This is none too large in an instrument used for the accurate measurement of the errors of refraction, where it is desirable to emphasize rather than suppress the circles of diffusion. On the other hand, many European modifiers of the ophthalmoscope have chosen smaller apertures, thereby reducing the value of their instruments as refraction-ophthalmoscopes, but making it much easier to study the details of the fundus with them.

The inclined or tilting mirror should be used. Practised ophthalmoscopists find it more convenient and satisfactory, and to those less accustomed to the use of the instrument it is of much greater importance; less, perhaps, for its theoretical advantage of having the plane of the correcting lens perpendicular to the axis of vision, than for the greater ease in keeping the fundus properly illuminated. As a rule, the tilting mirror has heretofore been confined to the more costly and elaborate refraction-ophthalmoscopes. There is one exception to this rule that merits notice. In 1882, Dr. Baumeister described a form of opththalmoscope presenting no features of especial importance to the ophthalmic specialist, and hence as yet little known outside of Germany. Through the aid of Queen & Co., who have imported it, I am able to show a specimen of this form of instrument. Its special advantage is, as you see, a mirror tilting either way to an angle of twenty-five or thirty degrees. The aperture of the mirror is but two and a half millimetres. It has also a good series of seven lenses arranged in a Rekoss disk. Moreover, this instrument is sold for but little more than the old Liebreich ophthalmoscope. This matter of cheapness is not unimportant for an instrument that is to aid in generalizing the practice of ophthalmoscopy. Despite the importance of thorough equipment for professional work, the cost of a good instrument keeps many from making its practical acquaintance. Its deterrent power is especially felt by the recent graduate, just when the hospital and dispensary opportunities and comparative leisure in private practice offer him the best and perhaps the only chance for gaining facility in the use of the instrument, and just when the insight it gives into vital processes would be of the greatest value.

But, as in Baumeister's ophthalmoscope, *cheapness should be secured by simplicity, never by poor workmanship.* In no instrument of diagnosis, not excepting the microscope, is perfect workmanship more important. There is none in the use of which mechanical imperfections are so se-

rious a hindrance. And good construction includes more than the general strength and durability of the instrument. It in-



cludes thin lenses, freedom from reflections at the sight-hole, a spring-catch to centre accurately the lens in use, mounting the lenses so that they can be readily cleaned and kept clean, and other details which might seem unimportant, but which all help to determine the ease and satisfaction with which a given instrument may be used.

To recapitulate: the physician who does not undertake the correction of exceptional anomalies of refraction needs an ophthalmoscope simply but well made, with a few well-chosen lenses conveniently arranged, and a tilting mirror with a small central aperture or sight-hole. When the use of such an instrument becomes more or less familiar to well-trained physicians engaged in all branches of medical practice, we shall be able to appreciate better the debt of the physician to the inventor of the ophthalmoscope.

Chief Medical Purveyor J. H. Baxter, M.D., has been designated by the President Acting Surgeon-General of the Army, Surgeon-General Murray having been retired on age.

TWO CASES OF EXTENSIVE EXTRAVASATION FROM TRAUMATIC RUPTURE OF LARGE BLOOD-VESSELS.

BY LAMBERT OTT, M.D.,

Physician to the Out-Door Department of the German Hospital, Philadelphia.

MRS. R., tripped by a fold of the carpet, fell, striking her right shoulder. I saw her a few hours after the accident and found the shoulder-joint swollen, the least attempt at motion causing intense pain. I gave ether, and diagnosticated a dislocation of the head of the humerus into the axillary space, with separation from its shaft by a transverse fracture of the surgical neck. I made an effort to effect reduction of the displaced parts, but failed. I then placed the arm in the most favorable position for the fracture to unite, with the intention of afterwards establishing a new articulation if necessary.

On the second day after the accident a marked ecchymotic discoloration appeared just above the upper angle of the axilla and gradually extended over the right breast, involving its upper three-fourths; thence over the sternal surface and left breast, involving its greater part. This hemorrhage occupied a period of twelve days. While the ecchymosis was appearing in the left breast, the upper third of the arm on its inner aspect began swelling and discoloring, and just as the hemorrhage had ceased travelling on the chest, it ran down the inner side of the arm and extended to the fingers' ends, lasting in all twenty-four days. The tenseness of the ecchymotic parts began subsiding, and no further hemorrhage took place. While the bleeding was progressing, especially over the chest, the radial and ulnar pulsations were in the beginning not perceptible, and later quite feeble. The temperature of the extremity was lowered. While the hemorrhage was progressing down the arm the blood on the chest was being absorbed.

In six weeks after the accident nearly all traces of the hemorrhage had disappeared, but over the spot where it first made its appearance there remained a hardened lump, which disappeared only after many weeks. I discovered no bruit or pulsation. She made a fair recovery, the fracture united, and the arm gained limited motion.

This case was evidently a laceration of

an artery, produced probably during my attempt at reduction, or by the primary accident. Was it the axillary artery? When we consider that the radial and ulnar pulsations were in the beginning not perceptible and later only feebly pulsating, we are justified in thinking that this artery was injured. But would it be possible for such a spontaneous recovery to take place? I predicted an unfavorable ending either by suppurative inflammation and septicæmia, or by the hemorrhage sacculating and forming an aneurism.

Case II.—Cabinet-maker, aged 45 years, slipped on the ice and fell on his side. He quickly got up and walked thirty squares to his home, thinking himself unharmed by the fall. Ten minutes after reaching his home, while seated at the table, he felt a sudden, sharp pain in the outer middle third of the thigh, and when he attempted to get up to go to his bed he was unable to walk. He suffered severe, continuous pain the following night, occasionally having intense exacerbations.

I saw him the morning after the accident, and found a large, hard, tense swelling on the outer side of the middle third of the thigh, faintly fluctuating, very painful, and extending a length of seven inches; reaching within two inches of the knee-joint. The posterior border of the tumor terminated abruptly, owing to the obstruction offered by the intermuscular septa of the fascia lata dipping between the vastus externus and biceps muscles. The thigh could not be moved, owing to the painful tension caused by the tumor.

Drs. O. H. Allis and Bissey saw the case in consultation, and concurred with me in the opinion that the tumor was due to hemorrhage from a ruptured vessel. I ordered rest and compression by a bandage. The next morning the swelling had extended to the knee, simulating the swelling of synovitis. There was no discoloration over the tumor.

On the fourth day ecchymotic discoloration appeared over the anterior tibial surface of the leg, and extended as far down as the ankle. At the same time the tension of the tumor began to subside, probably owing to an outlet having been found which caused the leg-discoloration. He gradually improved till the tenth day, when a local elevation of temperature and fluctuation became more marked. Fearing suppuration, I cut down on the tumor, turned out eight ounces or more of clotted blood, washed out the cavity, and closed the wound. The cavity was next to the shaft of the femur, between the bone and the overlying muscles. Its length was six inches, and its breadth three inches. After two weeks of absolute rest and compression, he made a good recovery, only having severe neuralgic pains of the anterior tibial nerve.

This was evidently a rupture of one of the larger veins, due either to direct concussion or to sudden muscular strain in his effort to preserve his balance. The pulsations of the anterior and posterior tibial arteries were normal. He was a strong, healthy man, and the degree of debility ensuing seemed disproportionate to the severity of the accident.

BLOOD CATHETER.

BY DE F. WILLARD, M D.

MANY a physician has been foiled in his attempt to empty a bladder of urine by the persistent clogging of the eyes of the instrument with coagula, whenever even slight difficulty of entrance has been encountered.

The instrument represented by the accompanying cut has been put to thorough and practical tests, and has proved itself to possess the following advantages in all cases where trouble is expected during introduction, or where even slight hemorrhage is probable.

1. Its eyes are two or three times the ordinary size.

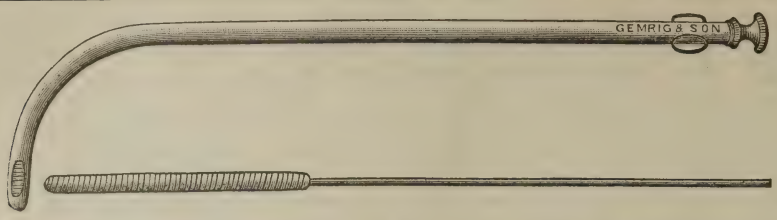
2. It is carried into the bladder with the eyes closed, thus preventing choking of the apertures during the slow and often difficult passage along the urethra or through the neck of the viscus.

3. The obturator or plug can be rotated *in situ* or slid backward and forward so as effectually to clear the openings.

4. The rapid withdrawal of the obturator loosens the clots by suction.

5. The obturator can be reintroduced and manipulated as frequently as necessary, without the slightest injury to the patient.

6. If desirable, injections into the bladder can be made through it, or a Bigelow Evacuating Apparatus can be attached to remove large accumulations of blood or of clots in the bladder.



The instrument as made for me by Gemrig, of Philadelphia, is of any desired size, the apertures being large, and the interior of the tube being accurately filled with a sheet-metal spirally-coiled obturator or plug, which is very flexible and moves easily in all directions.

TRANSLATIONS.

Freire's Prophylactic Inoculations for Yellow Fever. — M. Rebourgeon communicated to the Société de Biologie the results of his observations and experience with regard to the preventive inoculations against yellow fever practised with Dr. Domingos Freire at Rio Janeiro, and according to his method. The months of December, 1885, and January of this year were extremely hot in Brazil, and the yellow fever had raged with unprecedented intensity. Of three thousand and fifty-one vaccinated subjects in the city of Rio not one died, while in the same quarters and in the same houses two hundred and seventy-eight non-vaccinated persons perished. He claimed that the number of vaccinations had reached six thousand, and not one inoculated person had succumbed to the scourge. Moreover, in seven cases in which inoculations were made at the second period of the affection cure was complete. The number of strangers who submitted to the treatment were relatively small. Native Brazilians and mulattoes were the principal sufferers, while full-blooded negroes, though less severely than the others, were not rarely attacked. In reply to a question, he stated that foyers of infection were observed at an elevation of more than seven hundred metres.

In the discussion following this paper, M. Maurel made the important observation that diet might be a predisposing cause of yellow fever. The negroes at Guadeloupe who are engaged in the hospital and adhere to the Creole régime (almost exclusively vegetable) were not attacked, while their comrades outside, who lived upon the same diet as their masters, were frequently seized. Evidently the animal regimen favors the development of the disease. This opinion was held by some of the old writers, and, as experience has shown, with good reason.—*Le Progrès Médical*, No. 22.

Lactic Acid in Tuberculous Ulceration of the Larynx.—The favorable reports of Mosetig-Moorhof on the action of lactic acid in fungous caries and lupus vulgaris, and the subsequent application of the same remedy by Krause to the treatment of ulcers, induced Dr. Theodor Hering, of Varsovia, to employ it in the hospital under his care. He found it very beneficial in tuberculous ulceration of the larynx, in applications commencing with a ten-per-cent. solution, and increasing as the case progressed to eighty per cent., or even the pure acid. Out of twenty cases of which details are given, four were completely cured, two almost cured; four were greatly relieved; six were functionally improved; and only four were not benefited. The results were the more striking since the patients were not under the best hygienic conditions. Where pain was caused by the applications, cocaine was found to prevent it. An ingenious instrument is figured with which he made the applications to the larynx.—*Annales des Maladies de l' Oreille, du Larynx, etc.*, July, 1886.

Iodol in Ophthalmic Practice.—A paper by M. Trousseau was read at the June meeting of the Société de Thérapeutique at Paris, upon the use of iodol in ocular therapeutics. This agent, which is in the form of a gray powder, contains about eighty-five per cent. of iodine. In chronic blepharitis and resulting conjunctivitis it has given the best results. The following is used in preference to the ointment of the yellow oxide of mercury:

℞ Vaselin,
Iodol, āā g. x. M.

—*Le Progrès Médical*, No. 26.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, AUGUST 21, 1886.

EDITORIAL.

THE CAUSES OF FEMALE STERILITY.

THE excellent work of the late Dr. A. K. Gardner,* of New York, the suggestive and original essays of Dr. Matthews Duncan,† and, above all, the epoch-marking book of the lamented Sims,‡ comprise nearly all of value that has been written in English upon the causes and treatment of sterility in women. From German gynæcologists a considerable number of contributions to the subject have appeared within the past ten years. The most complete, systematic, and practical of these is a monograph of one hundred and eighty-six pages by Dr. E. H. Kisch,§ who is a professor in the University of Prague and chief physician to the famous Marienbad Springs in Bohemia. According to the author, sterility depends upon one of these three general conditions:

1. Inefficient ovulation.

2. Prevention of the fructifying contact between spermatozoa and ovule.

3. Inability of the uterus to secure the development of the ovum.

Professor Kisch defines sterility of the female as "that pathological condition in consequence of which a woman during the period of sexual activity fails to become pregnant, notwithstanding frequent and normally-completed sexual intercourse."

The statistics of Duncan, Ansell, Simpson, and Kisch show that the average proportion of sterile to fertile marriages is from twelve to fifteen per cent.

In fruitful marriages the first child is born within fifteen months after the wedding in nearly two-thirds of the cases; while the first confinement is delayed beyond the third year of married life in less than five per cent. Hence the author considers himself justified in fixing the period at which a married woman who has not borne children is to be considered as sterile at three years after marriage. He fails, however, to take account of that pretty large and evidently growing class of married people who are wilfully sterile. Such cases necessarily vitiate all the statistics bearing upon this question and render them untrustworthy.

Sterility necessarily results when the ovaries are absent, atrophied, or insufficiently developed. Early marriages (before the twentieth year) appear to be less fruitful than those entered into after the latter year. After thirty, however, the percentage of sterility increases again. The figures given to show the unfavorable influence of early marriages upon the fecundity of the woman do not seem, however, to bear out absolutely the conclusions of Kisch.

Diseases of the ovaries (cystic degeneration, oöphoritis, syphilis, new formations) may cause sterility, but not necessarily.

Corpulent women are sterile in a large proportion (nearly one-fourth) of cases. The sterile condition of corpulent women is evidently connected with the frequency of amenorrhœa (deficient ovulation) among this class. The exact relation between corpulence and menstrual irregularities is, however, not understood.

The influence of heredity upon the production of sterility is shown in the cases called in England "only-child sterility." The female offspring in such a case can have little hope of experiencing the joys of maternity.

As regards the behavior of the uterus

* The Causes and Curative Treatment of Sterility. New York, 1856.

† Fecundity, Fertility, Sterility, etc. London, 1871.

‡ Clinical Notes on Uterine Surgery, New York, 1866, and "Memorial Edition," 1886.

§ Die Sterilität des Weibes. Vienna and Leipsic, 1886.

during the act of coition, Kisch is inclined to believe that a free secretion of alkaline mucus normally takes place from the cervical glands, which promotes the mobility of the spermatozoa and facilitates their entrance into the uterine cavity. He also thinks it probable that during the stage of orgasm the uterus descends in the pelvis, the cervix becomes rounded, the os uteri and the uterine ends of the tubes dilate, and, after expulsion of the plug of tenacious mucus which fills the cervix, the semen is drawn into the cervical canal. The spermatozoa then make their way through the uterine cavity into the tubes, where they encounter the ovules and impregnation takes place.

Inflammatory and other pathological processes in the pelvis, whether affecting the organs of generation or their adnexa, may cause sterility. Conical and stenosed cervix uteri, uterine displacements, hypertrophy of the cervix, subinvolution of the uterus, cervical and corporeal catarrhs, latent gonorrhœa, lacerations of the cervix, new formations or malformations of the uterus, vagina, or external genitals, may all prove hindrances to normal contact of spermatozoa and ovule, and thus prevent fecundation. A case is quoted from Hennig, where hydrocele of the round ligament existed; after operation upon the hydrocele, the woman (who had been sterile fourteen years) conceived. Kisch has also observed several cases in whom excessive accumulation of fat in the vulva, with pendulous abdomen, proved obstructions to effective coitus.

Urinary fistulæ must also be regarded as causes of sterility. Kroner has reported sixty cases of fistulæ, in only six of whom conception followed after the accident. Sterility is also a frequent consequence of vaginismus and other pathological states of the external genitals.

Qualitative alterations of the vaginal and uterine secretions may render fecundation impossible by destroying the vitality of the spermatozoa before these can reach the ovule.

Kisch believes that active participation in the sexual act by the woman is necessary to conception. He states that dyspareunia* and sterility are so frequently combined that the etiological connection between them cannot be denied. In forty sterile women examined by him with reference to this point, dyspareunia was present in thirty per cent. He instances in support of the view that voluptuous feeling is an important aid in furthering conception the fact that, in the majority of instances, sexual enjoyment is only gradually developed in women. In consequence of this gradual development of sexual feeling, conception does not usually take place until some time after marriage. The time of first conception, he claims, usually coincides with the awakening of this voluptuous sensation in woman. "Thus the capacity for conception is only developed after a sufficiently long practice of the act of copulation"! (P. 105.) This rule, if it be a rule, is one with many exceptions.

Masturbation and other unnatural methods of satisfying the sexual desire are also accused of being causative of sterility; but it seems with insufficient reason. These practices are so frequently the accompaniment of other pathological conditions of the sexual organs that it is impossible to ascribe the morbid influence to any special one of them.

An analysis of 3127 cases collected from Mayer, Kammerer, Mondot, V. Grünewalt, Levy, Kulp and Jaquet, L. Meyer, Sims, Beigel, and Kisch, shows that the physical causes of sterility in women are proportionately as follows: uterine, peri-uterine, and ovarian inflammations in 40 per cent.; uterine displacements in 40 per cent.; structural defects

* The author uses this word in its strict etymological sense: *dys* = bad, and *pareunos* = a bedfellow. The signification usually given to it by authors is painful or difficult coitus.

and ulcerations of uterus and cervix in 16 per cent.; uterine tumors in 7 per cent.; vulvitis and vaginitis (including gonorrhœa) in 2.6 per cent.; corpulence* in 1.8 per cent.; ovarian tumors in 1.2 per cent.; vaginismus and atresiæ of vagina and hymen in 1 per cent.

The therapeutics of female sterility must be deferred for consideration until another occasion.

TWO ADDRESSES ON MEDICINE.

AMONG the papers of the universally-lamented Flint was fortunately discovered the complete manuscript of his address which he, as the representative and exponent of American medicine, had been invited to deliver before the British Medical Association at its meeting which has been held during the past week. For the first time in the world's history, the honor of delivering the Annual Address on Medicine before the British Medical Association has been conferred upon a physician of the United States; and, lo! there are two! With our Christian liberality we have, when asked for our coat, given our cloak also.

The first address, prepared but not delivered, has been published in a handsome monograph containing a phototype portrait of Professor Flint, its title being "Medicine of the Future."† This Address, which with commendable foresight had been completed, as if in anticipation of the sad event which forever silenced his voice, has with reverent hands been given to the profession by his son. In it the veteran professor first indulges in a retrospective glance over an experience of half a century as a practitioner and medical teacher.

Looking forward from the stand-point of his personal experience, the distinguished author expresses with much confidence his belief in the glorious destiny of medicine. Part of his argument is expressed as follows (page 2): "I assume that medicine, as it is to-day, will not remain stationary. In everything relating to human knowledge, anticipations have no basis other than that of experience. The past history of medicine shows a law of progress: hence medicine will continue to advance. I shall view this conclusion, however, from another and a higher standpoint. If we believe in an overruling Creator and Governor of the universe, everything, however great or however small, must be in accordance with a divinely-ordered plan. Diseases doubtless have their uses, some of which are apparent to human comprehension. The prevention and the successful management of diseases also enter into providential design. The past gives an assurance of progressively increasing security of human life from diseases. The progress of medicine belongs, therefore, to the order of Providence."

A closer examination of the prominent characteristics of the last half-century led him to believe that it is particularly in the departments of microscopical research, biological chemistry, bacteriology, and the applications of electricity to diagnosis (telephone in auscultation, etc.) that its advance might be anticipated. Clinical experience, after all, is the only solid basis of therapeutics. He believed that good reason would be found in the future for a more frequent resort to the practice of venesection than at present. By its abandonment under the pressure of public opinion a useful measure of treatment has been given up, but "the time will come (and that ere long, for it is now foreshadowed) when it will have its proper rank among therapeutic agencies. Physicians will take advantage of the promptness and efficiency of its effect in certain conditions of disease, and will observe a certain con-

* Kisch: 58 out of 250 cases. The other observers mentioned did not report corpulence as a cause in their cases.

† Published by D. Appleton & Co., New York, 1886. Printed on extra heavy, toned paper, bound in cloth. 8vo, pp. 57.

servatism as regards its potency for harm as well as good. To carry out the principle of rejecting remedies because they are capable, if used without due discrimination and discretion, of doing harm, would be to emasculate the materia medica. A remedial agent can have but little value if it be not capable of acting injuriously as well as usefully. In the ability to employ potential agencies so judiciously as to secure their good and avoid their evil effects lies the secret of true success in the practice of medicine."

Among the immediate problems of pathology he cites the gastric and intestinal glands, whose physiological functions are so active and important that their diseased states offer a vast field for future clinical research. The thyroid body, the lymphatic glands, and the supra-renal capsules must have important physiological functions not yet ascertained, and corresponding importance in pathology.

In conclusion, some thoughts are offered concerning medical literature, medical instruction, and the medical profession of the future. Advocating monographs upon special subjects in the place of comprehensive, systematic treatises upon medicine, he predicts "that didactic, except as complemental to clinical, teaching will be more and more restricted, and perhaps at length be entirely discontinued, recitations and the study of books taking its place. Laboratory-teaching is henceforth an essential part of medical instruction." The practice of medicine, he hoped, may not hereafter be so closely interwoven as hitherto in the popular mind with the use of drugs. While specialism is rendered necessary by the steady increase in knowledge, its demoralizing effects are fully recognized, and higher professional feeling recommended as the only successful means of opposing the tendency to withdraw the specialist from the common interests of the profession.

The Address in Medicine which was delivered by John S. Billings, M.D., LL.D., Surgeon U.S.A., was upon the special topic of "Medicine in the United States and its Relations to Co-operative Investigation."*

Dr. Billings first considers the subject of medicine in the United States, the population of which he finds nearly twice as well supplied with doctors, of various kinds, as England and Wales. With regard to the standard of education of medical practitioners, which has been declared to be too low, he justly states that the requirements of various sections of the country differ widely in their conditions, and consequently in qualifications and requirements for medical practice; that the professional rewards also are far from uniform; and that in general the people get the kind of doctors that they demand and are willing to pay for. He further declares, "In all our cities, great and small, there is a large class of physicians who are as well educated, and as thoroughly competent to practise their art, as can be found in the world." The efforts which have been made to secure legislation upon medical matters have come from the profession itself, and have been chiefly urged and recommended by physicians. If many of our medical laws remain a dead letter upon our statute-books, it is because of the indifference of the public; for all efficacious legislation must be in accord with public opinion, since it is impossible to continue to punish for any length of time that which public opinion does not condemn. Our efforts, therefore, must first be directed to the accumulation of evidence which the people can understand, and which will thoroughly convince them that it is to their interest to suppress quackery; and it is necessary to go slowly and allow such evidence to accumulate.

The methods adopted in different States, particularly in Alabama and Illinois, were

* The *Boston Medical and Surgical Journal* of August 12 contains the full text of this interesting address.

next considered, and also the indirect though important relations of the United States government to medical practice, through its Examining Boards for Army, Navy, and Marine Hospital Service, the Pension Service, etc. He also referred to the potential value of the National Board of Health, the work of which it is hoped will be resumed, with some change of organization, at no distant day.

The second part of Dr. Billings's address is devoted to the direction or manner in which we have reason to hope that medicine will be developed in the United States, and the kind of co-operation in medical research which may reasonably be expected from it. For laboratory work and bibliographical research this country has unequalled facilities in the Johns Hopkins, Carnegie, and Vanderbilt foundations, and in the library of the Surgeon-General of the United States. In geographical pathology and vital statistics much may be expected from the physicians of this country: to illustrate this the lecturer called attention to diagrams, based upon statistics furnished by the last census, as to the relative mortality from cancer, consumption, and pneumonia to the whole number living in different parts of the country, for the year 1880. Against a decadence which has been predicted to succeed the present era of intense thirst for knowledge, the only remedy is an increase of the world's stock of knowledge and wisdom.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

July 23, 1886.

THE elections which have just come to an end have been very fatal to the medical candidates. Four of the medical practitioners who sat in the last short-lived Parliament have lost their seats, and no new candidate has been successful. Mr. Lawson Tait suffered a crushing defeat in Birmingham, while Surgeon-Major Everett was about as unfortunate in Woolwich as Dr. Alfred Carpenter in Bristol. Mr. Ernest Hart declined to stand again for Mile-End, and the prudence of this resolve was amply proved by the defeat of the gentleman who took his place, in spite of influential backing and the personal assistance of Mrs. Gladstone. Mr. White polled less than thirteen hundred votes, against over fourteen hundred obtained by Mr. Hart, who had to contend against exceptional difficulties, inasmuch as a second candidate of the same political party was in the field. Dr. Balthazar Foster, whose defeat at Chester by a narrow majority has so excited Mr. Gladstone's ire, was fast making a reputation in Parliament, and his disappearance is a real loss; as, however, he is an influential member of the neo-liberal organization, his return to parliamentary life is only a matter of time. He is the Chairman of the Council of the British Medical Association, and was therefore able to speak with peculiar authority during the debates on the Medical Law Amendment Act, which is one of the few measures upon which the last Parliament could agree. The Act belongs essentially to the Whig type: there is a great deal of talk about reform and very little performance. One of the results will be that we shall have a contested election this autumn for certain seats on the General Medical Council: every registered practitioner resident in Great Britain and Ireland will be able to vote, and there will probably be no lack of candidates. The main duty of the General Medical Council is to keep a correct register of all persons qualified to practise in this country. Under the new Act, persons holding foreign degrees in addition to English, Irish, or Scotch diplomas will be able to register their degrees, and it will be permissible also to register the Certificates in Sanitary Science granted by the universities and colleges.

A paragraph which first appeared in Mr. Labouchere's newspaper, *Truth*, has been copied into some medical papers in the United States: it refers to a recent examination at Oxford conducted by "three learned dons" at which only one candidate, eventually unsuccessful, presented himself. The tone of this paragraph appears to show that the bitter opposition which the proposal to organize a medical school at Oxford had to meet has degenerated into mere factious fault-finding. The fact is that the new faculty has only been legally constituted within the last few months, if indeed the legal formalities are even yet complete, that the physiological laboratory is barely finished, that the anatomical department is lodged in small temporary premises, and that in truth the school cannot be really said to begin its career until after the long vacation.

From some curious statistics compiled by a writer in the *British Medical Journal*, it would seem that the medical men who hold Oxford degrees are of peculiar eminence:

no less than thirty-two per cent. of the whole number are teachers in medical schools or hold prominent positions. The proportion among Cambridge graduates is 25.7 per cent., among London graduates 13 per cent., and among Dublin graduates 10.8 per cent. The general average for the ten British Universities (with over ten thousand medical graduates) is 5.2 per cent. How far these figures are to be trusted it is impossible to say, but they are probably approximately true, and confirm the general impression which is got by daily experience.

An association of general practitioners has been formed in order to improve the relations between consultants and general practitioners. It is complained that a patient who goes to consult a physician, a surgeon, or a specialist is very often lost to the general practitioner who had previously attended, and it is alleged that there are consultants who habitually take advantage of their opportunities in order to detach patients from their former attendants. There are, of course, two sides to the question. Many general practitioners appear to regard a proposal to obtain a second opinion in the light of an insult; patients who become aware of this betake themselves to the physician or specialist of their choice without mentioning their intention to the general practitioner, or the existence of the general practitioner to the consultant; others who know that they suffer from a disease or morbid tendency deliberately prefer habitually to obtain the advice of some distinguished authority on the subject. Undoubtedly there are many black sheep; the struggle for existence is very keen, and the fees taken by leading physicians and surgeons are absurdly low; young men, therefore, beginning life in London find it very difficult to make a living out of the profession, and too many yield to the temptations which beset their paths. It may be doubted, however, whether an attempt to boycott all physicians or surgeons who see patients without the intermediary of a general practitioner will have any good effect: by cutting off the hope of obtaining true consulting-practice it will confirm the waverers in their doubtful methods.

In the last letter addressed to you mention was made of a case of traumatic epilepsy, in which Mr. Victor Horley had trephined the skull and excised the scar. He has since performed a similar operation upon a case of tumor of the brain. The patient was a young man subject to one-sided epileptic fits: it was noticed that the fits began in the thumb, and, though there was no optic neuritis or other sign of cerebral tumor, Dr. Hughlings Jackson thought that it would be justifiable to cut down on the cortical centre for the upper limb. Mr. Horsley and Dr. Beeven had been making an experimental study of the arm-centre in monkeys, and their paper had just been read before the Royal Society. They had been able to subdivide the centre into three areas: stimulation of one of these produced movements which began in the thumb. This area might therefore be spoken of as the thumb centre, and in the case above referred to Mr. Horsley trephined over the area which he believed to contain the thumb-centre in man; immediately beneath the hole made by the trephine he found a tumor; he enlarged the trephine-hole and excised the tumor. By Dr. Jackson's wish he also excised the whole of the thumb-centre. The wound healed in five days, and the patient had no untoward symptoms. It is, of course, too soon yet to express any opinion as to the ultimate result of the operation as to the epilepsy. The apparent cause of the fits has, however, been removed without endangering the life of the patient, and that alone would be sufficient to establish the justifiability of the operation.

At the annual meeting of the British Medical Association, which begins at Brighton on August 10, Mr. Horsley will read a paper on these two cases and on the general subject of the Surgery of the Brain. The paper will be illustrated by a great many cuts, models, and photographs; and, as Drs. Hughlings Jackson, Ferrier, and Hughes Bennett have promised to speak, an interesting discussion may be anticipated. The meeting at Brighton is likely to be very successful: it is within easy reach of London, accommodation is plentiful, and the attractions many. Sir Andrew Clark has chosen a most practical subject, and his paper on cases of disease of the valves of the heart in which the lesion has been known to be present for upwards of five years without producing serious symptoms is sure to excite much interest; Sir Henry Thompson's paper on suprapubic lithotomy, and the discussion on the alternatives to craniotomy, which will be opened by Dr. Robert Barnes and continued by, among others, Professor Porro, and that on removal of the uterine appendages, introduced by Dr. Savage, of Birmingham, and to which Mr. Lawson Tait and Dr. Imlach will also contribute, are likely to wean many visitors from the holiday delights which the profession in Brighton are preparing for their delectation.

There is a slight epidemic of diphtheria prevalent at the present time. A good many cases have occurred in South London, and in consequence there has been an unusual number in the wards of Guy's Hospital, which is by no means adapted for the treatment of zymotic diseases. A young lady who had entered about a fortnight earlier to learn nursing contracted the disease and died, and the students have not escaped. The Metropolitan Asylums Board, a public body created to deal with epidemic diseases in London, though ready and able to undertake the management of diphtheria, is not allowed to do so, and as by a curious piece of bad law-making the power of designating what diseases shall

be considered infectious was left to the Privy Council,—that is to say, to a few lay clerks in a government office,—it is almost hopeless to expect that any alteration will be made until some serious catastrophe raises public indignation to fever-pitch.

Guy's Hospital has been singularly unfortunate during the last few years. The school was much injured by the long quarrel about the nursing of the hospital; then came the sudden death of Dr. Hilton Fagge, a most able teacher; next Dr. Mahomed died of enteric fever; and now this week we have news of the extremely sudden death of Dr. Walter Moxon, one of the most brilliant pathologists who has been connected with the institution. As Dr. Wilks, who was the senior physician, resigned in the spring in spite of all efforts to retain his services, the school is now much weakened on the medical side. W.

PARIS.

NOTES on New Remedies.—M. Heckel lately read a paper on the "Oil of Guilandina Bonduc" at the Académie des Sciences. It has been known for many years in India, and used with great success in intermittent and remittent fevers. It has been also employed in the French colonies, where it is considered a powerful tonic, and also in other tropical countries, administered either alone or else combined with other drugs, as castor oil, etc. The plant belongs to the Leguminosæ, and the part used is the seeds, which are sometimes called "cats' eyes." The two cotyledons contain forty to fifty per cent. by weight of the fixed oil, which has a strong, sharp, bitter taste and smell, and which no doubt contains its therapeutic principles. Dr. Isnard, who is chief physician to the custom-house at Marseilles, has made a number of clinical trials with this oil in doses of from ten to twenty centigrammes in intermittents, and he considers that it acts with as much certainty as a febrifuge as sulphate of quinine does.

Narceine.—Professor Brown-Séquard calls attention to the properties of this medicament, which has been very little used in Europe since it was discovered by Pelletier in 1832. Most of the medical authors concluded that it had no influence on the system, while others considered it toxic. During last winter, Dr. Brown-Séquard used it on himself, taking it up to the very large dose of one gramme and a quarter daily (twenty grains). He then employed it with the best results in cases of cough with bronchial hypersecretion, acute or chronic. Dr. Laborde spoke of the curative virtues of narceine in whooping-cough, and declared that it was beyond question the best of the opium alkaloids for producing sleep. He could assign no reason why this excellent medicine had been so much neglected, except that it is rather difficult to get it pure. He recommended the following test: Add to its solution one drop of diluted hydrochloric acid, which causes a beautiful blue color. In children it acts so well that it almost completely suppresses the night-paroxysms in whooping-cough. Dr. Laborde gives

℞ Narceinæ, 0.25 grm.;
Syrupis, 500 grm.;
Acidi citrici, q. s. ad solve. M.

Each spoonful contains one centigramme of the narceine, and the dose should be two and a half to three centigrammes. In adults Dr. Brown-Séquard says that we do not need to give more than five to fifteen centigrammes to produce sleep at night on going to bed. M. D'Arsonval, by increasing it until he gave a daily dose of fifty centigrammes, cured two cases of bronchitis which for two months had resisted everything else tried.

Dr. Albert Robin has submitted to the Société Médicale des Hôpitaux the results of his experiments upon a new system of medication adapted to typhoid fever and diseases of its character, in which the organism is encumbered with organic residue in a state of incomplete oxidation. To facilitate the elimination of these matters they must first be rendered soluble; and this was the end in view of the experiments. He employed benzoic acid and the alkaline benzoates. First of all, he gave them to healthy individuals who were submitted to a fixed régime for several days to reach a normal state, and then the remedy was administered, when a notable diminution of urea was found, as well as of all the other solid matters of the urine. We should not conclude from these facts, however, that benzoic acid is a moderator of combustion. What is really diminished is the combustible. After these trials, M. Robin gave benzoic acid to five patients who were down with typhoid fever, and at once the urea and solids increased. Salicylic acid and its salts produced the same results. There are a large number of chemical bodies that become transformed into benzoic acid and fix nitrogen in passing through the economy: such substances as toluene, xylene, propylbenzine, etc. So that here is quite a new mine of medicinal agents that can be of very great service in the course of all febrile diseases that are likely to be complicated with the typhoid state.

Injection of Gaseous Medicaments into the Rectum.—M. L. Bergeon says that this method is based, first, on the principle of physiology established by Claude Bernard, which proves that the introduction of even toxic substances into the rectum is not dangerous as long as the pulmonary elimination is not interfered with. Secondly, the fact has also been proved by observation, that a current of carbonic acid gas, perfectly pure, can be introduced in any quantity into the rec-

tum without danger, if proper precautions are taken.

Starting on these facts, M. Bergeon has tried this therapeutical method in a number of cases, and he first of all reports its results in patients who were suffering with pulmonary phthisis. After trying various substances as a medium, such as the antiseptic liquids, he gives the preference to sulphur mineral water. A current of four to five litres of carbonic acid gas is absorbed by two hundred and fifty to five hundred grammes of mineral sulphur water, and this quantity introduced into the rectum twice in the twenty-four hours. Several days after using the method the following changes were found: 1st, a diminution of the cough almost to suppression; 2d, a profound modification as to quality and quantity of the expectoration; 3d, a suppression of the night-sweats; 4th, a general improvement not only in cases of early phthisis, but also in confirmed phthisis. By daily observation and auscultation it was found that the humid râles seemed to disappear progressively. The results given are so encouraging, in fact, that a series of experiments will be made, and a report will shortly be given of the action of this new therapeutical remedy in a number of other diseases besides phthisis.

A New Emmenagogue, Oxalic Acid.—Formerly, in making a choice among the agents furnished by the materia medica of an emmenagogue, it was considered that the absence of the menses was due to a congestion or inflammation of the uterus; so that rue, savin, etc., were tried, as they were considered to possess some sort of dynamic action that would calm the congestion of the organ; or else it was supposed that the blood by some means had become altered and had been prevented from taking its habitual course; so drugs like saffron were tried, without much better results. Later it was discovered that the menstrual hemorrhage is nothing more than the consequence of ovulation, and there was a revulsion in therapeutical ideas, as the physiological basis had been entirely false.

Suppression of the menstrual flux can be caused by the opposite causes of insufficiency and plethora, action of cold, climate, habit, food, etc., but oxalic acid would seem, from the numerous clinical cases given by Dr. F. Poulet, to act in almost all of the various sorts of amenorrhœa.

It was reported that this agent acts equally well in almost all cases of catamenial difficulty where there may exist a febrile reaction with consecutive inflammation of other organs, and also when there is a hemorrhage, or when there is a suppression caused by a cold, which last is so common. Apiol is one of the few sure remedies left to us for use in amenorrhœa, but it can be used to advantage only when the suppression depends on some nervous cause; but oxalic acid, by the multitude of its applications, suits all cases. Attention is called also by this author to the fact that there exists an antagonism between the action of cinchonia and its salts and oxalic acid. He declares that just as much as oxalic acid favors and provokes the menstrual flow, so does quinine prevent it. So that the last should be a good remedy for metrorrhagia; and indeed Dr. Paulet and those with him consider quinine much superior to ergot in such cases: there is therefore great danger in giving cinchona preparations to women without considering the menstrual period. Oxalic acid has always been considered a very dangerous poison; but it seems to be one of our physiological proximate principles, since in the normal state it is found in the intestinal juice in considerable quantity, and it is now being studied in animals by Professors Armand Gauthier and Mathias Duval. It probably plays an important rôle in intestinal digestion. The following formula has been used as an emmenagogue:

℞ Acid. oxalic., 2 grm.;
Aquæ ferventis, 200 grm.;
Syr. aurantii corticis amaræ, 60 grm.
Sig.—Teaspoonful every hour. M.

In one case the whole of the above was given before the effect was produced; in other cases the menses came on before one-third had been taken.

Medical Clinic by Professor Germain Sée at the Hôtel-Dieu on the Diagnosis of Eruptive Fevers at their Commencement.—"Gentlemen, if there is a diagnosis in which your patients' families will not forgive any error, or even the slightest hesitation, it is just in these eruptive fevers, because experience has taught most mothers all about them: so that I am sure you will all be grateful to me if I can show you clearly the principal symptoms that will permit you to establish with certainty the differential diagnosis in some of these diseases. Let us, then, comparatively examine the eruption in rubeola, scarlatina, and variola discreta, when they commence. First of all, to be acquainted with the moment of the eruption, its evolution and duration, you must have constantly present in your minds the thermometrical curve of each one of these maladies.

"*Rubeola.*—The temperature-record of a case of measles shows in the course of the first day a sharp ascent, going at once to 38.8° C. After this first burst of heat, which might be called the 'fever advertisement,' the thermometer descends on the second day to 38°, and one is tempted to put this first febrile symptom to the account of some passing indigestion or rheumatism that cured itself at once; but the next day (the third day) the thermometer mounts up to 39.1°. In the evening it falls again, but on the fourth day it goes up to 40.2°. The fever is now at its acme, and you will hear

the 'dog's-bark' cough that is characteristic of the naso-laryngo-bronchic disorder, and at the end of twelve hours afterwards the eruption will be seen *on the face* after these four full days of incubation. In the following thirty-six hours the temperature falls quickly, and the fever rapidly finishes by 'defervescence.' So remember that after a total of six days this will be the termination, and also do not forget the sudden fall in temperature after the first 'fever advertisement.'

"*Scarlet Fever.*—Here at first the temperature, which on the first day in the morning was at 37° (normal), rises during that same day to 40.2°, and from the second day—that is to say, within the twenty-four hours from the start—this fever will have developed itself in all its intensity, and the eruption will have appeared. Up to the third day the eruption increases and the fever augments, the temperature going to 40.3°; the fourth day it is still at 40°, and only on the fifth day will it fall to 39.2°, and then descend to 38°, and next day to 37°. This return to the normal that terminates, again, a febrile cycle of six days is effected by *lysis*, as the temperature-curve will show.

"*Variola Discreta.*—The temperature in the first day rises to 39.3°, and one might think that it was the commencement of a scarlatina; on the second day the fever attains its culminating point, the thermometer reaching 40.3°, as in the scarlet fever; but the eruption, in place of appearing in the acme of the fever, does not appear until the third day, when the temperature has fallen to 39.1°, and this eruption is followed at once by a sharp defervescence like that of measles; on the fourth day the temperature falls to 38°. It may happen, however, that from the second day an eruption similar to that of scarlatina will appear, and since it is a source of error you must be warned against it; but notice that in scarlatina the fall of temperature is slow, and only begins *after the third day*, so that if you are called in at the moment the fever falls (that is to say, after the third day) you might conclude, in a case of scarlatina, that the patient was at the declining portion of the febrile cycle, and the eruption had been on already for some twenty-four hours; but if it be variola, the parents will tell you that it has *just come on;* and if it has been watched properly, they will say that the rash came on when the fever was at its highest point, on the second day of the fever. The next day, when the papules come out, the diagnosis will be clear. The second important point that you must always have in your memory, because it too is well known to the mothers, is the place where the exanthem will appear. In rubeola it always commences *on the face*, the papulæ show at first *about the lips*, rarely on the cheeks or forehead, but you must look in the mouth, on the palate, on the tongue and the lips, to find the early eruption in measles: the rest of the body will take it on afterwards gradually, and in about thirty-six hours it will most likely complete the round, when the fever falls. In scarlet fever the eruption often commences on the thoraco-abdominal portion of the body, and comes out on the face later, when you will see on the cheeks and forehead the scarlet patches while around the lips it will be pale. In regular variola the eruption commences also on the face, but the *whole face* is taken up by it, and it remains there for *twenty-four hours steadily* before going to the rest of the body (Sydenham first wrote of this fact), and after the first day of the eruption these facial papulæ become vesiculous, and it then passes to the rest of the body. During the five or six days that the eruption lasts, the evolution of the facial exanthem keeps up its advance over the rest,—that is to say, it is twenty-four hours in advance of the other parts of the body. Sydenham used to calculate the duration of the affection as follows: three days fever, five days eruption, and two days pustulation. If it should follow the regular type, the *swelling of the hands will replace the swelling of the face in eleven days from the commencement of the fever.*

"As to the exanthem itself, you will see in all three of these fevers different characters that should be well known, as they are sometimes indispensable in diagnosis.

"In rubeola you will see on the lips little red points which tend to coalesce and form *semi-circular* patches: these are always separated by healthy spots; the inequalities are clearly perceptible to the touch, and they form papular crescentic groups that are characteristic.

"In scarlet fever the eruption commences by enormous patches that take up at once a large part of the trunk, and in these patches you will remark very fine granular red points, that are reposing on the erythematous ground part; there is no grouping here of papulæ in semicircular arches, but it must be remembered that the ground-work will sometimes get pale in color some days after the eruption, and also in hemorrhagic rubeola the red ground will take a violet color.

"It only remains for me to indicate some auxiliary signs, such as in examining the mouth you will sometimes see the eruption in measles accomplish itself in and from the third day, and in scarlatina the desquamation of the skin may occur about the fourth day. Scarlatina is much more serious than rubeola. Not only in France is it to be feared, but also in England and in the United States, where it causes more consternation than diphtheria itself, because there the two are often grafted one on the other.

"Isolation is recommended for scarlatina, which should last for three months; for measles one month is sufficient; but it should not be forgotten that *both of these diseases are contagious from the first day.*"

Eye-Clinics in Paris.—The study of oph-

thalmology here is, without question, rendered remarkably easy owing to the large number of these clinics. It is doubtful if this specialty can be elsewhere so well worked up as it can in Paris. There are over twenty public clinics (in all really twenty-nine of them), conducted by excellent surgeons, who take pleasure in showing students their operations and modes of treatment. The most prominent of these eye-dispensaries are those of Dr. Landolt, at No. 27 Rue St.-André des Arts; Dr. Galezowski, 26 Rue Dauphiné; Dr. Meyer, Rue d'Assas; Dr. Abadie, 172 Boulevard St.-Germain; Dr. De Wecker, etc. All of these are in the school or "Latin quarter," close to one another, and are open every day. The doctors have also private offices for consultations, both at the clinics and in the centre of the city at their homes.

The Paris Faculty of Medicine does not boast of many professors in the specialties, but it does possess in Professor Panas, who is surgeon to the Hôtel Dieu, a most eminent eye-doctor. His clinic is held at the hospital daily, and operations are performed three times a week. The clinic is constantly thronged with patients and students and foreign physicians, following the professor's free teaching. It might be remarked as a curious fact that almost all the oculists in Paris speak English and German as well as their native French.

In former letters we gave the antiseptic treatment and dressing used by Dr. Panas, of the mercuric biniodide in solution, and we may say that the success in its use is constantly increasing. To give a proof, we saw recently a number of cases of enucleation of the eye which left the hospital perfectly well within five days after the operation, without there having been the slightest drop of suppuration.

In reply to a young American surgeon who asked him how often he lost the vitreous in cataract-operation, he said he might almost say it never occurred. M. Panas is strongly of opinion that certain forms of glaucoma can be treated successfully without operation. He uses eserine and physostigmine or pilocarpine as follows:

℞ Eserinæ sulphat., .05 grm.;
Aquæ destillatæ, 5 grm. M.

Or

℞ Pilocarpinæ nitratis, 0.10 grm.;
Aquæ destillatæ, 5 grm. M.

Sig.—Drop a little in the eye several times a day.

The forms of glaucoma that seem to be most benefited are just those in which operation seems useless. The use of the drugs must be prolonged for months.

The French Association for the Advancement of Science gives a list of some of the subjects to be treated upon at the next congress, to be held in August at Nancy. The meeting will be an important one, and many of our local celebrities will be present. We add some of the subjects: "On the Protection of Infants," "Composition of Cow's Butter at Different Periods of Lactation," "Falsification of Oils and Butters," "The Rôle of Pancreatine in the Economy," "Relapse in Typhoid Fever," "On Progressive Pernicious Anæmia," "On the Organization of the Teaching of Hygiene in the Medical Faculties," and "On Conservative Surgery of the Foot."

THOMAS LINN, M.D.

PARIS, July 16, 1886.

LOUISVILLE, KENTUCKY.

WITHIN the month just past there was held at Winchester, in the heart of the blue-grass country, another meeting of the State Medical Society. The attendance was larger than the accommodations of the city were sufficient for, and the interest in the meeting was manifested in the prompt attendance of the visiting delegates at the time set for the gavel to fall.

Many scientific papers were presented, eliciting spirited discussions, a reference to each of which would be an injustice to all. I deem it better, therefore, to write you concerning one very important and interesting subject which was there presented, which may interest your readers. This was the report made by the committee appointed at the preceding meeting to report on Pathology, by Dr. Dudley S. Reynolds, of Louisville, chairman, who spoke nearly as follows:

"Within the past decade we have witnessed the development of an almost entirely new science of pathology. When in March, 1882, Dr. Robert Koch, of Berlin, publicly announced his discovery of the true and only cause of tuberculous diseases in man, the medical world experienced a thrill of joy.

"I take it not one in the medical profession, except it be some member of that class who never make any experimental observations, will now undertake to cast a doubt upon the declaration that tuberculous diseases, whether pulmonary or not, are all due to one common cause,—viz., the presence of a fungus now known as the bacillus of tubercle.

"Tuberculous consumption, then, is essentially a contagious infection. Those who inherit it (and they are by no means as numerous as we formerly supposed) show evidences of that inheritance at the time of birth, or within a few weeks after at most: they either succumb to its ravages or recover from it in infancy. No adult can possibly perish from inherited consumption or tuberculosis. The point I wish to make, in discussing the recent advances in this department of pathological inquiry, is the frequency with which the bacilli of tubercle are found in the upper

air-passages, and the readiness with which they become colonized, so to speak, in exudations of lymph from the Schneiderian and pharyngeal mucous membranes.

"I have observed in a score of recorded cases the presence of the bacillus of tubercle in the lymph of the nasal passages, the pharynx, and in two instances in the middle ear, in persons who had absolutely sound lungs, and who were not tormented with even an occasional cough.

"The reason the bacilli of tubercle are sometimes developed in the upper air-passages and in the middle ear is very plain. It is known that a person with a perfectly sound respiratory membrane, extending through the nose, the pharynx, and on into the bronchi, may inhale the bacilli of tubercle,—that they will lodge in the mucus and remain for a brief period, when they are again expelled by expectoration or otherwise, without showing the least disposition to proliferate. When an abrasion occurs, however, and an exudation of lymph appears, as will occur in persons of the lymphatic diathesis, the choicest medium is supplied for the growth of the fungus. Thus it is that tuberculosis is so easily and frequently acquired. The subject of enlarged tonsils is especially liable to contract tuberculosis because the tonsils, being lymphatic glands, are, when enlarged, generally engorged with the normal contents which accumulate in excess.

"If rupture should take place in the delicate walls of this lymphatic gland, a quantity of lymph appears of course upon the surface, and if tubercle-bacilli inhabit the air such a person breathes, they will likely find lodgment in this lymph and there become colonized. Thus it is we find many persons having chronic inflammation of the nose or pharynx, and even of the larynx, resist all treatment. Imagine, if you will, an exudation of lymph from the tonsil inhabited by the bacilli of tubercle in a person who has at the same time a general excess of lymph in the whole system, with an abrasion somewhere in the nasal passages or in the pharynx from which the lymph exudes. You see how easily the respired air might transmit them so short a distance, and in that way establish several foci of development for these bacilli, and, it might be, the lymph-channels of the whole body eventually become affected from the invasion of the bacilli from these points of abrasion or from rupture in the capillary lymph-tubes.

"The influence exerted by the bichloride of mercury in sterilizing lymph so as to arrest the growth of bacilli is now attracting the attention of the most astute observers, who no longer seek to destroy the bacilli outright, but rather to render sterile the lymph in which they grow, and who trust to other means for the expulsion of superficial colonies or the formation of abnormal connective-tissue walls in the inflamed areola of local tuberculous deposits, thus locking up the most of the mass of tuberculous matter until natural decay seizes upon it, and a precipitation of the earthy salts of the inflamed tissue constitutes the so-called calcification or chalky degeneration of the tuberculized tissue.

"In another branch of pathological research great advances have been made. It is known to every cultivated student of medical literature that typhoid fever is almost uniformly taken into the system with the water. It has been recently observed that a malignant form of the disease known as the hemorrhagic type is fairly traceable to a bacillus identical in all respects with that which infests swine.

"Some recent observations of a very interesting character were made at the pathological laboratory of the Hospital College of Medicine at Louisville. On the 26th of March, 1886, Dr. Frank C. Wilson brought to me a bottle of water, accompanied with a note from Dr. John A. Larrabee which read thus: 'This water is from a well which has been used for drinking-purposes by a family in which three deaths have recently occurred from typhoid fever; to-day there are two new cases in this family,' and requesting an examination of it.

"In the afternoon of that day I proceeded to evaporate as much of this water as would conveniently lie upon a cover-glass previously sterilized. Treating twelve covers in this way, I moistened the residuary matter with fresh egg-albumen taken from an egg broken at the moment of use, and, pressing the prepared surface of another glass upon this, distributed the egg-albumen in as thin a layer as possible; then, separating the cover-glasses by a gentle sliding movement, they were again dried, and stained, some with methyl violet, some with methyl blue (known as Loeffler's fluid), and some with Bismarck brown. All these were mounted in a solution of Canada balsam in benzole. The specimens were studied with the $\frac{1}{8}$ homogeneous immersion objective and the D eyepiece.

"Those stained with methyl violet appeared as beautiful jointed rods curled at the ends, and were present in abundance, the rods being violet red with a line or dot of intense blue in each joint. Those stained with the methyl blue and Bismarck brown were less satisfactorily made out.

"On the 27th of March Dr. Larrabee sent to me a four-ounce bottle filled with putrid matter of a brownish brick-dust color, said to be blood passed from the bowels of a patient who was suffering with a hemorrhagic type of typhoid fever. A small quantity of this blood was pressed between two cover-glasses and treated after Letzerich's method,—stained with methyl violet and mounted in Canada balsam. With the $\frac{1}{8}$ homogeneous immersion objective, an

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abundant collection—in fact, a pure culture—of bacilli identical in every respect with those found in the water from the well were observed. These jointed rods were arranged in chaplets, and appeared not as Rindfleisch describes, as a deep blue, but a violet red with an intensely blue nucleus.

"This discrepancy in color under identical treatment may be accounted for upon two hypotheses. Possibly the methyl violet used was not precisely such as Rindfleisch employed, and, on the other hand, the chromatic properties of the objective with which the observations were made may account for the difference in color. It is certain, however, that precise identity in all respects was established between the bacilli of the dejections from the patient, who was known to have drunk of the water from the infected well, and those obtained from the water from this source.

"Pursuing my investigations further, I found in the water of the cistern in the yard where this unfortunate family lived large quantities of the same bacilli. The cistern was uncovered, and the water in it was within four inches of the surface of the earth; it was situated five and a half feet from the kitchen door. Twenty-two feet from the cistern, on a slightly-elevated surface, was a pig-pen, which was not closed, but into which hogs came to be fed and in which they slept. It was said no hogs had died about the premises, yet there were several dead hogs on the margin of Bear Grass Creek, two hundred and forty feet distant.

"Without stopping to discuss the relations between the various points of infected matter to the outbreak of the disease in the neighborhood, it is certain that the bacillus found possessed all the characteristic features of that which develops the most malignant types of typhoid fever, both in swine and in men.

"Another important matter in which great advances have recently been made is in the study of catarrhal inflammations of mucous membranes. The ophthalmia neonatorum presents certain features characteristic of a violently-inflamed mucous membrane, with tumefaction of the lids and a profuse discharge of a golden yellow or a yellowish cream-colored pus. Yet no naked-eye appearances are sufficient to distinguish the more rapidly destructive forms of that contagious type known as gonorrhœal inflammation from the milder forms, due no doubt in many instances to the lodgment of fragmentary portions of the vernix caseosa between the lids or the accidental introduction of other foreign matter. Neisser has pointed out the means by which the violently destructive and actively contagious types of purulent conjunctivitis may be readily distinguished from the matter furnished by the milder forms. The presence of highly-refracting cocci, spherical in form, and small ones grouped together in little colonies or masses identical with those described by Carpenter as zoöglœa, and the larger bodies scattered about over the field, are characteristics of this virulent pus.

"Treating the suspected pus after the method of Neisser, which consists in pressing the matter between cover-glasses, drying it over a spirit-lamp, staining with methyl blue, passing through oil of cloves, and then mounting in Canada balsam, the gonococci are readily recognized by the practised eye, even with a ⅛ dry objective and the D eyepiece: for differential study, however, higher magnifying power is necessary.

"Many more of the recent advances in pathology might be referred to; but it is deemed sufficient to attract attention to those named, in the hope of enlisting more general interest in the microscopic study of disease-producing fungi."

A very interesting discussion followed, at the conclusion of which the following was adopted, on motion of Dr. Reynolds:

"*Resolved*, That Dr. McCormack, as the representative of the State Board of Health, be appointed the chairman of a committee to transmit to the Board the unanimous desire of the Society for a brief and practical plan by which the public and the profession may be able to secure the destruction of, and determine the mode through which, the bacilli of tubercle are conveyed from person to person, that it may become possible to prevent the danger of permitting these bacilli to escape and remain undestroyed in the air of our public buildings and in our streets and highways." ALLEN H. KELCH.

WASHINGTON.

SANITARY MATTERS IN THE FORTY-NINTH CONGRESS.

SANITARIANS have received scant comfort from the Congress which has just adjourned its first session. The bill for the establishment of a National Health Bureau went to sleep early in the winter. Intended, as it was, to create an office for a sanitary official temporarily out of employment, it lacked sufficient vitality to keep it alive. Its failure will probably cause very little regret.

The bill for the appointment of a commission to study yellow fever, which was introduced by request of the American Public Health Association and endorsed by the American Medical Association and other medical societies, had an excellent opportunity of passing. It had passed the Senate without a dissenting voice, and, in an amended form, was unanimously reported by the Committee on Commerce in the House. Congress recognized the practically unanimous endorsement which the measure received from the profession as well as the press, both professional and lay, throughout the country. Had the bill been allowed to come to a vote upon

its merits, there is no doubt that it would have been adopted by an overwhelming majority. It failed because, under the rules of the House, objection by a single member could prevent its consideration. Throughout the session it was evident that the members of the National Board of Health and their adherents in Congress were inimical to the measure, though no one could understand the reason for their opposition. The prospects of the bill finally dwindled in the last days of the session through the persistent objection of a member of the House from New York, who signalized his presence in no other way during his entire service. The cause of his opposition was a mystery until it was discovered that he was a family connection of one of the members of the Board. By their enmity to this measure the members of that organization invited its own destruction. The Sundry Civil Bill as passed contains no appropriation for the continuance of the Board.

The later history of the National Board of Health is not a creditable one. It was peculiarly the offspring of the American Public Health Association, and started out on its career with brilliant prospects. The parent organization sustained it with all its influence, even under discouraging circumstances, until it became evident that the members of the Board cared nothing for the latter *qua* Board, but were solely interested in perpetuating their own official existence. Some of the members foresaw what was coming and "stood from under" in time, but the others waited until the ruin toppled about their ears, and few will probably waste much sympathy over their final obliteration.

The only drawback is that no legislation on sanitary matters seems probable now for a good many years, unless an epidemic compels it. It is not unlikely that had the members of the Board, who had held office through two administrations, tendered their resignations when the present administration went into office, and given President Cleveland an opportunity to fill their places with live men in sympathy with the new order of things, some provision would have been made for the continuance of the organization. Their selfish obstinacy has placed the prospect for national sanitary legislation farther in the future than it has seemed to be at any time within the last decade. The sole protection of the country against invasion by exotic epidemic diseases now rests with the Marine Hospital Service and a rational local quarantine. Inasmuch as only a few ports have anything like an efficient system of local quarantine, the activity of the Revenue Marine Coast Patrol must be depended upon to guard the vulnerable points. Even at the time of writing this, yellow fever is at the National Quarantine Station at Ship Island, in the Gulf of Mexico, and threatening the central Gulf coast with invasion.

The Oleomargarine Act, which has passed Congress and received the approval of the President, is in a measure a sanitary law, in that it will prevent artificial products from being sold as butter, but in its main features it is a protective act in favor of the dairy industry. Its sanitary bearings had probably no influence in securing its adoption.

Congress has also passed a law requiring instruction in hygiene in the schools of the District of Columbia and in the Territories. The manifest object of the act is to impress upon school-children the deleterious effects of alcohol upon the system. It is doubtful whether the sort of instruction which will be given under the provisions of this law will commend itself strongly to sanitarians.

To-day is the date for the retirement of Surgeon-General Murray, of the army. Dr. Murray, who has served in the medical corps of the army since 1847, has been one of the most popular chiefs the medical corps has ever had. He has earned his retirement by long and faithful service. The best wishes of all who know him will attend him in his private life. It is not yet known who his successor will be, although many guesses are heard. G. H. R.

August 6, 1886.

PROCEEDINGS OF SOCIETIES.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, MAY 6, 1886.

The President, B. F. BAER, M.D., in the chair.

(Continued from page 834.)

TAIT ON FARADIZATION.

DR. R. P. HARRIS also presented the following letter from Mr. Lawson Tait, of Birmingham, dated April 16, 1886. "I have very strong objections to the proposal to treat cases of extra-uterine pregnancy by faradization. In the first place, the diagnosis of these cases must always be hap-hazard: that is to say, a correct diagnosis will not be made probably more than once in three times. The result will be that all such cases will be dealt with with mischief only, and I venture to predict that this treatment will be dropped, as all such treatments are, without explanation of the case, in a very short time.

"My greatest objection is that, supposing the fœtus has passed through the stage of tubal rupture and remained alive, what right have you to murder that child? If it goes on to the full term it may be delivered alive, and the woman will have a chance of recovery from the operation far greater than with the faradization treatment of destroying the child. The cases, according to my experience, which

recover from the operation are about six out of seven.

"Every one who has had much experience with pelvic tumors must have seen a certain number of cases where the fœtus has died between the fourth and sixth month, and where, after a prolonged course of suppuration, it comes out through the rectum, bladder, etc. These are, of course, the cases where the tubal rupture has taken place into the broad ligament on the left side. I have seen one right-sided case going into the bladder; it of course killed the patient.

"In the whole course of my life I have known of only one case where the woman has carried an extra-uterine pregnancy for a number of years after the death of the fœtus. We know with perfect certainty all about this case, and for about eighteen years she has carried on the left side a condensed ovum of extra-uterine pregnancy. I doubt very much if there could be found in the whole world three other such cases; whereas the number of cases who die or who have prolonged illnesses after the suppuration and discharge of the fœtus is, even in my own experience, very great."

In closing his letter Mr. Tait writes, "I wish you would make this opinion of mine known on your side."

In reply I will state: 1. We do not in this country practise electrolysis in cases of extra-uterine pregnancy. No puncturing needles are used, and the electro-magnetic current will not endanger the life of the patient any more if the growth to be acted upon is a tumor than if it be, as presumed, an ectopic fœtal cyst. The experience of seventeen years in the United States, in which no fatal result is believed to have taken place, has only tended to establish this fœticidal method as a valuable means of saving women when in great danger from rupture of the fœtal cyst and internal hemorrhage.

2. We do not propose to act upon the fœtus after it has escaped into the abdominal cavity, unless the fœtus should be very small and be easily accessible to the pole of the battery placed in the vagina. We cannot see that it is any more a murder to destroy a two or three months' fœtus after it has escaped from a Fallopian tube by rupture than while it is still in it. The chief objection lies in the fact that such an ectopic fœtus will be much more likely to give trouble after its destruction than one that is securely enclosed in a sac from which the amniotic fluid shall have been absorbed. It is true that an abdominal fœtus may be delivered alive at term if permitted to live; but it is not correct to estimate the risk of such an operation as lower than faradization properly performed; for it is far higher. Primary laparotomy, as far as we know of the operations, has been fatal in fifteen out of nineteen cases.

It is not proposed in this country to operate by faradization upon fœtuses of from four to six months. Dr. T. G. Thomas has, it is true, proposed to make the limit four and a half months; but the general impression is that fœticide is much safer immediately and remotely if done in the second and third months, when fœtal ossification is very incomplete. The entrance of fœtal débris into the bladder is not necessarily fatal, as in the case related by Mr. Tait, for Parry refers to nine cases, four of which recovered.

Mr. Tait appears not to be aware of the fact that cases of prolonged ectopic gestation have been comparatively numerous, as witness the following partial record.

1. Nebel reports the case of a woman of 91 who died in 1767, and in whose body a fœtus was found that she had carried fifty-five years. (Campbell on Extra-Uterine Pregnancy, 1840, p. 45.)

2. Brandt records one of a woman of 80, who died in 1858, after carrying a fœtus for fifty-six years, and bore two children while it was still in her abdomen. (Ranking's Abstract, 1863, vol. i. p. 216.)

3. Parkhurst reports one of a woman of 77, who carried a fœtus fifty-two years. (*British and Foreign Med.-Chir. Rev.*, 1856, vol. i. p. 271.)

4. Chiari gives a case of a patient who died of pneumonia when 82, who carried an eight months' fœtus for fifty years. (*Lancet*, Lond., 1876, vol. ii. p. 141.)

5. Conant's case was a woman of 53, who died in June, 1863, after carrying a fœtus thirty-five years. (*New York Med. Journal*, May, 1865.)

6. Majon found, in a woman of 78, a calcareous fœtus computed at three months. (Cruveilhier, Essai sur l'Anatomie pathologique, Paris, 1816, tome ii. p. 130.)

7. Mangin and Vernier found two fœtuses in the body of a woman of 74, which she had carried thirty-three years. (*Jour. de Médecine*, 1786; *Gaz. Méd.*, July 29, 1837.)

8. Morand also found a three months' fœtus in a woman of 78; she had carried it thirty years. (Mém. de l'Acad. Roy. des Sciences, 1748.)

9. Kristian Grön found a three months' fœtus in a woman of 49, which had been carried eighteen years. (*Norsk Magazin for Lægevidensk*, band xvii. haft 2.)

10. Johannis Ambosi (1582) reported a case of a woman of Sens, who carried a fœtus twenty-eight years. (See Astruc, Traité des Maladies des Femmes, Paris, 1765, tome iv. p. 78.)

11. Campbell reports the case of a woman of 75, in whom was found a fœtus that had been carried thirty years; a fœtus of about two months was also found. (Campbell on Extra-Uterine Gestation, Edin., 1840, p. 55.)

12. Pepper relates the case of a patient of 53, married twenty-seven years, in whose body Dr. Loder found two fœtuses, one car-

ried twenty-three years. (Trans. Pathol. Soc. Phila., 1876, p. 102.)

13. Francis Bayle removed an eight-pound fœtus after the death of a woman of Toulouse, that she had carried twenty-six years. (Philos. Transac. abrid., London, 1794, vol. iii. p. 222.)

14. Cruveilhier, in his Anatomie Pathologique, gives a plate representing a calcified fœtus which had been carried many years.

15. Œlinger reports the case of a woman who carried a six-and-a-half months' fœtus about fifteen years. (*Prog. Méd.*, Paris, 1884, vol. xii. p. 196.)

16. Johnson's case, aged 68, carried a fœtus fourteen years, after which she discharged fœtal remains at intervals during thirty years. (*Med. Times*, Lond., 1872, vol. i. p. 655.)

17. Leinzell, in 1720, removed from the body of a woman of 94 a fœtus that she had carried for forty-six years.

18. Watkins examined a woman of 74, who died of kidney-disease January 13, 1866, and removed a fœtus which she had carried for forty-three years. (*Brit. Med. Jour.*, March 3, 1866.)

19. Van Swieten also records the case of a woman of Lyons, who died at 68, and had carried a fœtus for twenty-seven years (*opus cit.*).

20. Fabri, of Ravenna, found in a woman of 55 a fœtus she had carried for some years. The pregnancy was her fifth, and she bore two children at later periods. (*Brit. Med. Jour.*, March 7, 1863.)

Many more cases of the same character might be added to this list, some of which would go to show that an extra-uterine fœtus may prove fatal by purulent disintegration and pointing after twenty years or more. Even an ectopic fœtus of three months may cause perforation of the rectum and possibly a fatal issue, although this is a rare result. It will be noticed that in three of the twenty-one cases the fœtus was computed at three months, and in another a second fœtus was of two months.

Dr. O'HARA exhibited a

FIBRO-CYSTIC TUMOR OF THE UTERUS,

removed after death from a patient æt. 53 years, who had carried it for over twenty years. Three years after it was first observed she applied to Dr. Atlee for relief by operation; but he declined, and recommended that it should be left alone. The tumor contained numerous small cysts, measured thirty-nine and a half by thirty-four inches in circumference, and weighed thirty pounds. The peritoneum was one-fourth inch in thickness, and was of a yellowish-white color.

Dr. PARISH remarked that the tumor had formed no adhesions, with the exception of a few slight ones to the omentum, and the removal of the ovaries and tubes would have been feasible at any time. Both tubes were dilated and in a condition of hydrosalpinx. The tumor sprang from the fundus uteri, the cavity measuring only four inches. The tubes and ovaries had remained at their normal position in relation to the uterus, but had been elevated out of the true pelvis. The vagina had been stretched upward, as also had been the uterine body and neck. The uterus below the fundus had diminished in size to about that of the index-finger. The bladder, by reason of the traction upward, had lost its attachments to the uterus, and merely retained posteriorly its attachment to the vagina. Ordinarily, the extent of the attachment of the bladder to the uterus becomes greatly increased in large uterine fibroids. In the specimen submitted, supravaginal amputation of the uterus with the tumor could have been effected without separation of the bladder from any of its attachments. It is interesting to observe the condition of bilateral hydrosalpinx some six years after the menopause. The patient died with acute symptoms of vomiting and purging of dark fluids, containing probably blood extravasated through the intestinal walls. At the autopsy no indications of perforation of the intestine were apparent. The patient was able to engage in active work until a few days prior to death, and hence the double hydrosalpinx could not have occasioned pronounced symptoms.

W. H. H. GITHENS,
Secretary.

PATHOLOGICAL SOCIETY OF PHILADELPHIA.

SEMI-ANNUAL CONVERSATIONAL MEETING, APRIL 22, 1886.

The Vice-President, JAMES TYSON, M.D., in the chair.

DR. GEORGE A. PIERSOL read, by request, a paper on

MEDICAL PHOTOGRAPHY.

The character of photographical work which the medical man may probably desire to undertake may be divided into three groups: first, photographing specimens; second, photographing patients; third, photographing microscopical specimens; to which possibly a fourth should be added, making lantern-slides and enlargements for the purpose of illustrating lectures. As to outfit, all of these requirements must be borne in mind. At the present time, possibly the best equipment for medical work would be one of Walmsley's modified copying cameras, as manufactured by the American Optical Company, taking a $4\frac{1}{4} \times 5\frac{1}{2}$ plate, fitted with a first-class lens. Regarding the latter, those desiring the best might limit their choice with advantage to the lenses made by Ross, Dallmeyer, or Beck. Personal experience with the Beck lens warrants a most favorable recommendation, as its superior qualities adapt

it admirably to work requiring fine definition with great focal depth. As a matter of economy, the excellent lenses of Darlot might be substituted for the higher-priced English glasses. As much less expensive, the "Waterbury" outfit (camera, lens, and tripod costing but fourteen dollars) is worthy to be considered. The addition, however, of a light wooden extension is imperative to obtain sufficient length of bellows to reproduce specimens of a normal size, a matter often desirable. A lens adapted for medical work would be a rapid rectilinear combination of about 8½- or 9-inch equivalent focus, a shorter focus-lens possessing insufficient focal depth. In addition to the camera and lens, a simple dark-room outfit—embracing non-actinic lantern, three trays, graduate, dust-brush, light-proof box for opened packages of plates, and a few tubes—is necessary. Proper illumination is essential for satisfactory results. An evenly-distributed top-light is most desirable. This can be obtained readily from a sky-light; such a convenience, however, is frequently wanting. An excellent substitute may be readily had by removing the apparatus to the open air and stretching over all a piece of muslin, thus providing a mellow, evenly-distributed top-light admirably adapted for photographing specimens. In focussing, the use of a focussing-glass is advantageous. Focus without the diaphragm on a point lying midway between the extremes of the planes of the specimen: afterwards put in the smallest stop (say No. 128 F. = 45.2 English scale). The small stop necessitates a rapid plate unless the exposure is unduly prolonged. A fast plate and small stop, when properly employed, yield pictures with the best possible definition and great focal depth, qualities very essential to satisfactory representations of specimens. In order to insure acceptable results, a correct exposure should always be attempted. The length of exposure depends upon many conditions; among others, actinic power of the light,—this being modified by sunshine or clouds, by time of day, and by season of the year,—color of the specimen (a tissue deeply dyed with blood requiring much greater exposure than the alcohol-bleached organ), character of the sun, size of diaphragm, sensitiveness of the plate, strength of the developer. Since these all modify the duration of any individual exposure, the oft-heard comparisons as to the bare numbers of seconds given upon various negatives are of very little importance. Each worker must determine for his own conditions the exact number of seconds required on the ordinary specimen, and, with this as a basis, meet changing conditions as the occasion demands. While there are many excellent formulas, the following developer has always answered admirably: with it, by slight modifications, all kinds of work may be satisfactorily performed.

No. 1.

℞ Pyrogallic acid (Schering's), 1 oz.;
Sodium sulphite, 6 oz.;
Water, 48 f℥.

No. 2.

℞ Sodium carbonate, 4 oz.;
Water, 48 f℥.

No. 3.

℞ Sodium bromide, 1 drachm;
Water, 1 f℥.

Use equal parts of No. 1 and No. 2 with three to five drops of No. 3 as a normal developer, the entire bulk of the developer being say three fluidounces. Remember No. 2 accelerates, while No. 3 retards development; No. 1 giving density. A plate is fully developed when the deep shadows show some detail, and when the cardinal outlines of the picture show on the back of the plate with reflected light. The most usual failures result from over-exposure and under-development. When a plate blackens rapidly, without the requisite amount of contrast between the high lights and deep shadows being at first present, we may strongly suspect over-exposure. Pour off the developer, flood with water, and then proceed once more with a developer to which say twenty to thirty drops of No. 3 have been added. The remedy for under-development is evident. Strongly to be emphasized: select a good brand of plate, choose a reliable developer, and only change when there exists a strong reason for so doing. By this plan alone can the peculiarities and valuable qualities of any plate be learned. In addition to these fixed conditions, by at first employing but one lens and a single diaphragm the path of the tyro is greatly smoothed. In photographing a patient, if possible, a sky-light should be used; when, however, none exists, we can succeed fairly in any well-lighted room, preferably one having two side-windows. Opposite to window No. 1 and about four feet removed we place our subject almost parallel, facing the second window. The lower half of window No. 1 is covered with muslin, while over the upper half is partly drawn the shade. Window No. 2 (farthest removed from the patient, but towards which he looks) is unobstructed. The camera is placed somewhere near the second window. Some simple background should be improvised, and the darker side of the subject should be lighted up by a reflector of white muslin. Since the actinic power of light is immensely reduced within-doors, our exposure would be unduly prolonged if we used the smaller diaphragms; we are therefore usually compelled to use the larger ones, Nos. 8 or 16.

Photographing microscopical specimens requires a camera with a long bellows,—twenty-four to thirty inches. This may be had by

adapting to the front of an ordinary camera an extension, which may be readily constructed of wood, cardboard, or tin. The inner surface of the entire track of the light from the objective should be lined with black paper with matt-surface. Any microscope admitting of a horizontally-placed tube, with a good stage and centring sub-stage, may be employed. Likewise any objective possessing good definition and flat field may be used. The eye-piece is best removed, the camera and microscope being united by simply inserting the draw-tube into the extension of the camera and wrapping the joint with a few turns of some black fabric. Illumination is very important. Four sources may be considered: lamp, calcium, electric, and sunlight. Calcium and the arc electric lights, while quite satisfactory by way of experiment, are practically debarred by the expense and inconvenience attending their use. The incandescent electric light at the present time offers little advantage over good lamplight and is far inferior to sunlight. It may be stated, once for all, that sunlight properly employed is the best possible illuminator for photomicrography. As it requires some care in its employment, and above all the devotion of the busiest hours of the day, we may inquire what can really be accomplished by lamplight. Mature consideration and considerable experience justify us in saying that with care and proper manipulation really good photographs may be made with powers up to the one-sixth. Of course very much higher lenses may be employed, even the one-fifteenth and one-sixteenth; but thoroughly satisfactory lamplight work with lenses approximating one thousand diameters is seldom if ever seen. One thing seems demonstrated beyond question: that with any power it is almost impossible to obtain the soft but brilliant micronegative — full of detail and vigor—that sunlight is capable of yielding. For lamplight, a lamp with a single moderately broad wick should be employed, the edge of the flame being turned towards the object. For very low powers, three to one and a half inch, no condensing lens is necessary. With higher powers, the interposition of a four-inch-focus plano-convex lens is advantageous; and with still higher lenses (say from the two-thirds up) some sort of substage condenser in addition is almost imperative. After many experiments with various forms, a "B" eye-piece as a condenser seems to yield the best results, giving a powerful and evenly-distributed illumination. Accurate centring and even distribution are of the utmost importance. First centre the substage condenser. Avoid "pushing" the illumination, as when the centre is racked too high the margin of the field is distorted. Experience teaches the advisability of using a slow "clean-working" plate (say Carbutt's "B") in preference to the very rapid brands. A mirror placed at the end of the work-table opposite the ground glass of the camera is of great assistance in adjusting illumination. A small hand-glass is also convenient to reflect the picture when hunting fields. The most important as well as difficult manipulation is focussing. With a short "pull" no especial requirements; but when a long camera is extended, removing ground glass to three or four feet, some arrangement of moving adjustments is necessary. The simple arrangement with cord and weights which we devised eight years ago, and which has of late become extensively used, we still recommend as meeting all possible requirements. It has been put to the severest tests with powers of over three thousand diameters, and never has been found wanting either in delicacy or accuracy. A modification may be applied to the coarse adjustment. A focussing-glass is indispensable: the point of most accurate focus is where the image seems to melt into the ground glass. Preparations must be well differentiated and thin, possessing sufficient contrast and actinic opacity. In certain cases, by using glass of a complementary color to the stain, excellent results are obtained. While lamplight suffices for low powers, yet for the high powers and for difficult work such as bacteria sunlight is by all odds to be preferred. By arranging a simple mirror to swing laterally and vertically we can substitute the necessity for a heliostat. Light from this mirror passes through a plano-convex lens of eight inches focus, through a cell of ammoniosulphate of copper to the substage condenser. Here again accurate centring and evenly-distributed illumination are absolutely essential for good results. To those aspiring to the best results, especially with difficult subjects and high powers, a trial of sunlight is strongly urged, as by this illumination alone are many of the capabilities of photomicrography rendered possible.

Succeeding his address, the lecturer exhibited on the screen about fifty examples of various kinds of work. Nearly half of these were photographs of pathological specimens; the remainder were photomicrographs of histological and pathological preparations, taken with objectives giving from the lowest to the highest amplifications, among which an admirable photograph of the bacillus tuberculosis attracted much attention.

Dr. T. D. Dunn presented

AN UNUSUAL CASE OF CORTICAL HEMORRHAGE, WITH RHYTHMICAL CONTRACTIONS OF THE LEFT SIDE OF THE BODY.

A widow, æt. 73 years, came under his care June 23, 1886, with the symptoms of congestive apoplexy. In a few days she recovered sufficiently to be able to leave her room. With the exception of some mental impairment for several months before the attack, her health had been good. February 6

there was a second attack during the night, and when Dr. Dunn saw her there were regularly recurring movements of the left side of the body. Sensation and consciousness were not affected. The right side of the body could be moved at will, but articulation was impossible. The contents of bowels and bladder were discharged involuntarily. The movements continued during sleep. The movements gradually diminished, being lost in the leg on the fourth day, and in the arm on the fifth. She died six days after the attack. At the autopsy a clot as large as a hen's egg was found situated on the right side of the brain, very superficially extending from the ascending parietal convolution to the occipito-parietal fissure, and from the convolution of the longitudinal fissure to the temporo-sphenoidal lobe. The convolutions pressed upon and partially destroyed were the ascending parietal, the convolution of the longitudinal fissure, the supra-marginal and the angular.

Dr. F. A. Packard presented a patient having

A CONGENITAL ANOMALY OF BOTH HANDS.

The right hand consists of a thumb, an index, and a little finger, with only two metacarpal bones. The thumb has two phalanges, and articulates with the same metacarpal bone as the index finger. The power of flexion is absent. The index finger has three phalanges. It can be flexed as a whole, but the individual phalanges are fixed. The little finger has three phalanges. The left hand consists of a thumb, index, ring, and little fingers, with four corresponding metacarpal bones. The patient is one of five children. His mother and father are normally formed. One sister has one hand that resembles his left. Another has a left hand similar to his, and on the right hand has the middle and ring fingers united throughout their length. One brother has both hands similar to this man's left. The only member of his generation not deformed is his twin brother. He has several children, all normally formed, and so, too, with his nephews and nieces.

Dr. J. M. Barton presented

A TUMOR OF THE STOMACH REMOVED FROM THE BODY OF A MAN ÆT. 47 YEARS.

His digestion became impaired two years ago, and soon afterwards he noticed the tumor. The symptoms were mainly those of chronic gastritis, with at one time a profuse hemorrhage. The tumor was hard and well defined, and occupied the epigastric region. At the autopsy the tumor was found occupying the upper portion of the pyloric outlet of the stomach, and did not encroach enough on the outlet to prevent the ready passage of a finger. It was found on microscopic examination to be a scirrhous carcinoma.

W. E. HUGHES, M.D.,
Recorder.

REVIEWS AND BOOK NOTICES.

LECTURES ON DISEASES OF THE NERVOUS SYSTEM, ESPECIALLY IN WOMEN. By S. WEIR MITCHELL, M.D., etc. Second Edition, Revised and Enlarged, with Five Plates. Philadelphia, Lea Brothers & Co., 1885. Octavo, pp. 283.

Of this well-known work it is unnecessary to do more than point out the changes which distinguish the present from the first edition. Some of the earlier lectures have been altered, occasionally by omissions, but more frequently by additions. Thus, the chapter on hysterical tremor and chronic spasms has been much enlarged and separated into two chapters, additions have been made to that on vaso-motor and respiratory disorders in the nervous and hysterical, while entire new chapters have been added on hysterical joints and hysteria and organic diseases of the spine. The paragraph at the end of chapter xii., on defecation in hysteria, has been expanded into a chapter, and everywhere through the book the touch of revision is seen. Like all Dr. Mitchell's books, this is pleasant reading, and has especially the effect of making the diagnosis and treatment of nervous diseases seem "not so very difficult, after all," to the uninitiated.

ESSENTIALS OF VACCINATION. A COMPILATION OF FACTS RELATING TO VACCINE INOCULATION AND ITS INFLUENCE IN THE PREVENTION OF SMALLPOX. By W. A. HARDAWAY, M.D., Professor of Diseases of the Skin in the Post-Graduate Faculty of the Missouri Medical College, St. Louis. St. Louis, J. H. Chambers & Co., 1886. Duodecimo, pp. 146.

This little volume is not intended to be a comprehensive treatise on vaccination, but it is excellently compiled, and may well take the place of more ambitious treatises on the table of the practitioner. The various chapters on the History of Vaccination, Variola in Animals, Nature of Vaccinia, Vaccinia in the Human Subject, Abnormal Modifications and Complications of Vaccinia, Revaccination, Different Kinds of Virus and Methods of Obtaining and Storing them, The Operation of Vaccinating, and, finally, Examination of the Objections to Vaccination, though compendious, are sufficiently full, and contain just what is required to bring a practical man up to the times and to give a hurried man the information wanted on the spur of the moment.

THE ANNALS OF HYGIENE.—This monthly journal has been made the official organ of the State Board of Health, and is now engaged in publishing the papers read before the late Sanitary Convention. It is well conducted and handsomely printed, and ought to be worth in health-hints many times its cost to any intelligent family.

NEW REMEDIES AND CLINICAL NOTES.

TREATMENT OF DIPHTHERIA. — Dr. M. Ware, in a paper read before the Dakota Medical Society, gave the following outline of treatment. To overcome the tendency to putrefactive changes and the formation of poisonous alkaloids, and to neutralize their effects after they have been formed, are the principal objects to be accomplished. Oxygen, in the form of fresh pure air, is the first essential. The surrounding premises, as well as articles of food and drink, should be carefully looked after. Where milk is used, it should be boiled unless it is known to be pure. Alcohol and common salt are the best agents to use, both externally and internally, to arrest putrefaction. Swabs he does not regard as of much use, and discards them in favor of a douche, from a Davidson syringe, of warm (120° to 125°) salt water, the solution containing ten to fifteen grains to the ounce, with which the throat and mouth are thoroughly washed every two hours. The water need be made only 102° to 105° for use in the nasal passages, and the solution should be only one-fifth as strong. Iron, brandy, and lime-water are used from the beginning. If the nurse has a few spare moments, she is instructed to give a little more brandy. The tincture of the chloride of iron is used. Lime-water and milk are given at regular intervals. For the renal inflammation (albuminuria) he gives the oil of yellow sandal-wood, in ten- to fifteen-drop doses every four or six hours. No attempts should be made to remove or destroy the membrane. The main dependence in treatment would be iron, brandy, and table-salt. All dejections should be thoroughly disinfected, and as much care taken by physicians as in a case of smallpox during and after the disease.—*Dakota Medical Brief.*

THE SALICYLIC TREATMENT OF GLYCOSURIA.—In the *Brit. Med. Jour.*, May, 1886, p. 816, Dr. Sinclair Holden remarks that the recent researches of Professor Latham on the pathological connection between diabetes and rheumatism have given a fresh impulse with regard to the treatment of these diseases. Two distinct kinds of diabetes are recognized: 1, that which arises from a neurotic disturbance of the function of the liver, so that the glucose passes unchanged through the liver and appears in the urine; 2, that which arises from a neurotic disturbance of the function of muscle, so that glucose is formed in that tissue and passes into the circulation, and then into the urine. This second kind of diabetes is intimately connected with rheumatism; it only requires a degree more or less of oxidation to determine whether the muscular tissue generates an abnormal amount of lactic acid or of glucose in the system. It has been shown by Dr. Latham that salicylic acid has the power of arresting the formation of both lactic acid and glucose. Dr. Holden contributes notes of six cases of glycosuria occurring in rheumatic patients, all of which were cured by giving salicylic acid. The first and most marked effect of this treatment in the glycosuria of rheumatic patients is the almost complete removal of the distressing polyuria. The dose of salicylic acid should be from ten to fifteen grains three times a day. In cases of diabetes where no rheumatism exists, no benefit is obtained from taking salicylic acid.

MISCELLANY.

THE MUNICIPAL LABORATORY AT THE URBAN HYGIENIC EXHIBITION.—The Paris Municipal Laboratory is well represented at the exhibition of urban hygiene now open at the Jobau barracks. The arrangements made allow every one interested to follow minutely the work done and the progress made by this useful institution. The analyses made by the municipal laboratory are on an average 16,500 yearly, of which there are 7000 specimens of wine examined, and 4500 of milk. The service includes a chief, an assistant chief, two principal chemists, twenty-three assistant chemists, twenty inspectors, and four clerks. The hygienic importance of water-investigations is now universally admitted. This laboratory practises the biological test in water-analysis, based upon the culture of microbes in gelatin. These cultivations are made in flat-bottomed conical glass bottles: two tubes are placed in the cork, one with a glass top and the other plugged with cotton-wool. The process commences by rendering the bottles sterile in an iron stove capable of resisting two atmospheres, and large enough to contain one hundred and fifty of these receptacles. This stove is exhibited, as well as its vapor-generator, which is utilized to distil water for laboratory use. Ten c. of gelatin are subsequently introduced into the bottles, which has been sterilized at a temperature of 105–110°; and they are now ready for use. At the moment they are required for use the gelatin is liquefied by means of slight heat, and the water to be tested, diluted with a sufficient quantity of pure water, is poured through the tube provided with a tap. The gelatin solidifies in the process of cooling. The receptacles are arranged in a large metal chest with glass doors, in which the temperature is maintained invariable by means of a thermo-siphon. The bacteria develop and give birth to colonies, which form as many spots as there are bacteria contained in the volume of water used. Wine is more care-

fully superintended by the laboratory authorities, and more tested at the laboratory than any other substance,—a fact arising partly from the number of wine-shops in the capital, and partly from the facility with which wine can be adulterated by dishonest tradesmen in order to increase their profits. At the exhibition, whosoever wishes to do so can witness the series of operations to which the wine analyzed is submitted. First, the density is taken by means of a Houdart's ombarometer, the quantity of alcohol it contains is determined by distillation in an apparatus in which four wine samples can be tested at the same time by means of an ebullioscope, an instrument founded upon the difference existing between the two forms of boiling, that of water and that of alcohol diluted with water. At the municipal laboratory department of the urban exhibition there are different models of these instruments,—those of M. Malligand, Dr. Périer, and M. Armagat. There is also exhibited a particular kind of pipette which fills automatically, and serves to measure exactly twenty c.c. of wine; also the different methods of testing, which serve to determine the proportion of extract, of ashes, of tartar sulphate and acidity. The proportion of extract is determined in flat-bottomed cylindrical platinum capsules, which are warmed in special water-baths; they are afterwards left to cool in drying-cages before being weighed in precision scales. The extract is ascertained by allowing the wine to evaporate in a vacuum obtained by different means. The extract is then incinerated in a large gas-stove (*fourneau à moufle*), and the ashes are then weighed. The proportion of sugar is ascertained by Fehling's test; the proportions of acidity and tartar are ascertained by reagents of unvarying strength contained in bottles of a special form. Color-intensity is determined by Duboscq's chronometer, founded upon the comparison of light which has travelled up to different heights in the fluid. After wine, of which Paris consumes 1,400,000 litres a day, the most important substance is milk, of which the consumption is about 250,000 litres. The different processes in the analysis of milk are also exhibited. The density of the milk is first examined by the lacto-densimeter, then the cream is allowed to rise and its height measured by the creamometer by means of a pipette analogous to that used for the wine analysis; then ten c.c. of milk are measured and introduced into the flat-bottomed platinum capsules. This milk, evaporated at 95° in an iron stove, gives the extract, which is weighed and incinerated. A fresh sample of ten c.c. is then introduced into one of Marchand's lacto-butyrometers and mixed with pure alcohol; it is then heated in a special water-bath, and the height and quantity of butter which is separated are thus marked, and therefore easily estimated. Preserved vegetables are frequently colored green by using copper; it is not necessary here to discuss the question of their harmlessness, and we will only give a description of the little electro-apparatus employed to separate the metallic copper from the copper dust.

The Municipal Laboratory does not only practise chemical methods for solving the many problems submitted to it, it also verifies the purity of alcohol and oils by means of a refractometer, which is brought to such a degree of perfection that it determines without calculation and in a few minutes the co-efficient of the refraction of fluids. The density of coffee and all groceries is determined by a new volumenometer, which is easily used. A special apparatus is used for extracting from those articles of food substances which are soluble in alcohol and ether. A special kind of spectroscope is used; a table showing the spectrum of absorption of the principal coloring-substances, due to the researches of MM. Ch. Gérard and Pavot, can be consulted. The microscopic preparations of adulterated food-preparations are photographed by a magnificent apparatus. Numerous specimens obtained from the archives of the laboratory show that excellent results have been obtained with flour, pepper, vegetable sections, and diatomaceæ. A part of the exhibition is set aside for apparatus for making gas-analyses, such as drying-machines, gas-extractors for sewage; also several other instruments for estimating the density of gases, either by the quickness with which they escape or according to M. Charcot's method.

The Early Diagnosis of Uterine Cancer.—Professor Palmer, of Cincinnati, in a paper read before the Academy of Medicine of that city gave his views upon this important topic, as follows. Cancer is a disease three times more frequent in the uterus than in any other organ of the body. It is occurring with increasing frequency. This increase is largely apparent, the result very naturally of improved methods in diagnosis and more frequent examinations.

The benign affections which may be confounded with cancer are chronic inflammation, eversions, granular and cystic degenerations, and ectropium.

Nothing can be easier than the diagnosis of most of the benign diseases of the cervix uteri; nothing can be plainer than the determination of the presence of advanced cancer of this part of the uterus, by far the most common site. It is of vital importance that we recognize a malignant disease early if we would do any radical or permanent good, and mistakes are most generally made in the earlier stages of the disease.

For practical purposes he divided the subject into two parts:

1. The form of cancer simulating or con-

founded with parenchymatous or fibrous benign disease of the cervix.

2. The form of cancer mistaken for, simulating, or simulated by endometrial benign disease.

Probably the origin of cancer begins in a degeneration of the connective-tissue cells, either under the mucous membrane on the vaginal face of the cervix or up within the cervical canal, while the epithelial growths or ulcerations first invade the superficial epithelium. A carcinomatous infiltration arising within the connective-tissue cells of the cervix at once heightens the vascularity of the part, which looks reddish or bluish in color. It produces nodulations more or less hard, and diminishes the mobility of the subjacent mucous membrane. Should these changes start in a cervix previously healthy, or so little diseased as to excite no special attention, they progress so insidiously, it may be slowly, that in all probability the patient will not call on her physician until the second or ulcerative stage has advanced; or should they commence in a cervix already diseased by chronic inflammation, one that is being inspected for treatment from time to time, they may even advance to a considerable degree before any special suspicion is excited. The general health may be good or bad. The author thought that in most instances a diagnosis could now be made. The one thing needful is that a suspicion of malignancy be aroused. The symptom of Spiegelberg is not as reliable as was first supposed. Much can be learned by watching the development of treatment. It may be observed that while all the local conditions (leucorrhœa, erosion, induration, etc.) do improve under a well-directed local treatment, provided they are the offspring of an inflammation, yet if malignant they do not improve at all, and if so but slightly, never permanently. They manifest a special obstinacy to treatment; in fact, they progressively get worse. In women of advanced years such development should excite the gravest suspicions. If any doubts now remain, resort should be made to the microscope. I doubt if the microscopist can give us a reliable opinion without any other clinical evidences at hand, but with them the microscope becomes strongly corroborative and confirmatory. Fungoid degenerations may remain for a long time innocent formations, yet, on the other hand, they may quickly develop into malignancy. This transformation may be exceedingly slow, consuming years. This is important to remember, so that we may not be thrown off our guard. Unquestionably, malignant epitheliomatous degeneration is more likely to ensue in cases of cervical laceration in which the torn surfaces never cicatrize. Cicatrization, however, is not a barrier. The author recommended the use of the microscope and all other means of diagnosis, and thought the topical applications of glycerites of tannin, alum, and boracic acid to be of especial benefit in diagnosis.

Test for Drinking-Water.—A German newspaper has published an account of an apparently simple test for drinking-water, "invented" by R. Otto, a pharmacist of Quedlinburg. It is a solution which, poured into a tumbler of the water to be tested, should leave it quite clear for two or three hours. In bad water a gelatinous, transparent film will be formed on the surface within two hours. This reminds Dr. Hager that he published just such a test in 1871. He proposed a tablespoonful of a clear solution of tannin to be added to a tumblerful of water. If no turbidity occurs within five hours, the water may be considered good. If turbidity occurs within the first hour, the water is unwholesome. If turbidity is displayed within the second hour, the water is not to be recommended. Previously, in 1866, Dr. Hager had recommended for travellers, as a precaution in cholera times, the addition of the following solution (thirty drops to a litre) to any water they might be about to drink:

Tannic acid, 5 parts;
Syrup, 4 parts;
Distilled water, 6 parts;
Spirit of wine, 12½ parts.

Hysterical Amaurosis.—Dr. Castellarnau publishes the following case of hysterical amaurosis in the *Boletin de Hidroterapia* of Barcelona. A lady, aged 32, married, without children, of nervous temperament and weak constitution, had suffered from hysteria from a very early age. While working with a sewing-machine she noticed that for some reason it stopped, and, stooping over it to discover the cause, she pricked herself with the needle in the left superciliary region. She was very frightened, and thought that she had put her eye out. An attack of hystero-epilepsy, such as she never had had before, supervened. On recovering, she found that she was totally blind. No lesion of the eyes could be discovered; but, though she was treated by several medical men, no improvement resulted. She was then transferred to Barcelona for further advice, where, after four months' hydro-therapeutic treatment, she completely recovered.—*London Medical Record.*

The Use of Terpine in Chronic Bronchitis.—According to Dr. Rieu (*Gaz. Méd. de Strasbourg;* and *Bull. Gén. de Thérap.*, April 30), terpine, which has neither smell nor taste, can be given at a dose of from one to three grammes daily. It diminishes the expectoration in chronic bronchitis, but has hardly any effect in phthisis. Its action is the same as that of turpentine and creasote, but it is less disagreeable to take, and therefore preferable in some cases.—*London Medical Record.*

NOTES AND QUERIES.

OBITUARY.

PROFESSOR FRANK HASTINGS HAMILTON, M D., died at his home in New York City on the 11th inst., in the seventy-third year of his age. He had been suffering with pulmonary disease for several years, but retained his intellectual faculties until the last moment. He was born in Wilmington, Vermont, September 10, 1813, and was graduated at the University of Pennsylvania in 1833. Although his physical frame was delicate, he soon attained a position in the profession indicating abilities and energy of an unusual order. During the war he rendered important service as Military Inspector. When President Garfield was shot in 1881, it will be remembered, Dr. Hamilton was called in on the evening of July 3, with Dr. Agnew, for consultation and advice, and the former was associated with the case until the President's death. In his profession he occupied a high position. He held the chair of Surgery in the Faculty of Bellevue College, which he resigned in 1875. As a writer on medical subjects he was voluminous, learned, and an accepted authority. Among his best-known works are his treatises on "Military Surgery," on "Fractures and Dislocations," and his "System of Practical Surgery," a new edition of which has recently been issued. He made many valuable contributions to practical surgery.

Among the honorary positions which he held at various periods may be mentioned President of the Medical Society of the State of New York, 1865; President of the New York Pathological Society, 1866; President of the Medico-Legal Society, 1875 and 1876; member of the American Medical Association; Fellow of the New York Academy of Medicine; a founder of the New York State Medical Association in 1884; member of the New York County Association; member of the Society of Medical Jurisprudence and State Medicine; also Consulting Surgeon to Bellevue Hospital and the Hospital for the Ruptured and Crippled; St. Elizabeth Hospital and the Bureau of Medical and Surgical Relief for the Out-Door Poor

His life was a very domestic one. He was married in 1834 to Mary Virginia McMurtan, of Virginia, and in 1840 to Mary Hart, daughter of Judge O. Hart, of Oswego, New York, who died about a year ago. Two children, Theodore B. Hamilton and Mrs. Daniel Davis, survive him.

DR. WILLIAM R. CRUICE, a well-known and successful physician of the upper part of the city, was accidentally drowned while bathing at Spring Lake, New Jersey, August 15. He had been suffering for many years with Bright's disease of the kidneys, but he had a full physique and his appearance was that of health. He graduated from the Medical Department of the University of Pennsylvania in 1865. He was a member of the American Medical Association and other medical societies. He had many friends, both in the profession and among the laity.

THE editor of the *Journal of Cutaneous and Venereal Diseases*, New York, desires to obtain the expression from the individual members of the profession of their views as to the effects of the use of arsenic in the treatment of skin-diseases: as to what is the extent of its use; what diseases are especially influenced; what ill effects have been noticed; and what preparation is preferred. Replies should be directed as above, No. 66 West Fortieth Street, New York.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 1, 1886, *TO AUGUST* 14, 1886.

BRIGADIER-GENERAL ROBERT MURRAY, SURGEON-GENERAL, U.S.A.—Retired, August 6, 1886.

MAJOR GEORGE M. STERNBERG, SURGEON.—Granted leave of absence for fifteen days. S. O. 186, A. G. O., August 12, 1886.

MAJOR WILLIAM D. WOLVERTON, SURGEON.—Granted one month's leave of absence, to commence on or about August 15, 1886. S. O. 104, Division of the Atlantic, August 7, 1886.

MAJOR EDWIN BENTLEY, SURGEON.—Ordered from Department of Texas to Department of the East.

CAPTAIN D. M. APPEL, ASSISTANT-SURGEON.—Ordered from Department of the East to Department of Texas. S. O. 179, A. G. O., August 4, 1886.

MAJOR PASSMORE MIDDLETON, SURGEON.—Granted leave of absence until September 10, 1886. S. O. 100, Division of the Atlantic, August 3, 1886.

CAPTAIN R. H. WHITE, ASSISTANT-SURGEON.—Ordered from Angel Island, California, to San Diego Barracks, California, relieving Captain Leonard Y. Loring, Assistant-Surgeon. S. O. 64, Department of California, July 28, 1886.

CAPTAIN LEONARD Y. LORING, ASSISTANT-SURGEON.—Granted leave of absence for one month, on surgeon's certificate of disability, with permission to apply for an extension of two months. S. O. 59, Division of the Pacific, August 2, 1886.

CAPTAIN GEORGE W. ADAIR, ASSISTANT-SURGEON.—Ordered for duty as post-surgeon, Fort Brady, Michigan.

FIRST-LIEUTENANT CHARLES M. GANDY, ASSISTANT-SURGEON.—Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 113, Division of the Atlantic, August 6, 1886.

CAPTAIN JAMES C. MERRILL, ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Fort Klamath, Oregon. S. O. 130, Department of the Columbia, July 30, 1886.

CAPTAIN ROBERT B. BENHAM, ASSISTANT-SURGEON.—Relieved from temporary duty at Fort Omaha, Nebraska, and ordered to Fort Bridger, Wyoming. S. O. 97, Department of the Platte, August 5, 1886.

FIRST-LIEUTENANT W. E. HOPKINS, ASSISTANT-SURGEON.—Ordered from Fort Lowell, Arizona Territory, to Angel Island, California, for duty as post-surgeon. S. O. 61, Division of the Pacific, August 6, 1886.

APPOINTMENTS:

To be Assistant-Surgeons, with the rank of First-Lieutenant.

HENRY S. T. HARRIS, January 5, 1886.

LEONARD WOOD, January 5, 1886.

WILLIAM B. BANISTER, January 26, 1886.

CHARLES F. MASON, May 5, 1886.

PROMOTIONS:

To be Surgeons, with the rank of Major.

CAPTAIN JOHN H. BARTHOLF, ASSISTANT-SURGEON, January 4, 1886.

CAPTAIN JAMES P. KIMBALL, ASSISTANT-SURGEON, January 24, 1886.
(Mem., A. G. O., August 2, 1886.)

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM AUGUST 1, 1886, *TO AUGUST* 14, 1886.

SURGEON THOMAS C. WALTON.—To remain on present duty until September 1, 1887.

SURGEON C. H. WHITE.—To remain on present duty until August 21, 1887.

PASSED ASSISTANT-SURGEON C. W. RUSH.—Authorized to delay ten days, under orders to Sitka, Alaska.

PASSED ASSISTANT-SURGEON G. P. LUMSDEN.—Ordered to Hospital, Mare Island, California.

PASSED ASSISTANT-SURGEON L. B. BALDWIN.—Ordered to the U.S.S. "Ranger."

SURGEON J. L. NEILSON.—Detached from the U.S.S. "Ranger," to proceed home and wait orders.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDING AUGUST 14, 1886.

CARTER, H. R., PASSED ASSISTANT-SURGEON.—Granted leave of absence for thirty days, August 12, 1886.

GLENNAN, A. H., ASSISTANT-SURGEON.—Granted leave of absence for thirty days, August 9, 1886. To examination for promotion, August 12, 1886.

PETTUS, W. J., ASSISTANT-SURGEON.—When relieved at Savannah, Georgia, to rejoin station (New Orleans), August 13, 1866.

PHILADELPHIA, SEPTEMBER 4, 1886.

ORIGINAL COMMUNICATIONS.

THE SUBSEQUENT HISTORY OF A CASE OF PROGRESSIVE PERNICIOUS ANÆMIA REPORTED AS CURED BY ARSENIC.

BY I. A. LOVELAND, M.D.,

President of the Connecticut River Valley Medical Association.

THIS disease is so little understood that when cases do occur it is the duty of the physician to report them. It has fallen to my lot to have charge of the following case:

The patient was a merchant, aged 54, of temperate habits, slightly inclined to corpulency. General health good, with the exception of his digestive system, which was deranged by reason of dietetic errors. Mother died of cancer at the age of 80, a sister of diabetes at the age of 20, and one brother had phthisis and died when 35. Two brothers living; also his father, at the age of 85,—all in the enjoyment of fair health. For months previous to the patient's consulting a physician it was evident to the casual observer that some constitutional disease was slowly invading his system. His complexion was becoming pale, even white. He found that his usual business fatigued him, and that his heart violently palpitated when he made any extra exertion, such as going up-stairs. His appetite was poor, and food was taken with aversion. He was often nauseated, and was inclined to somnolence to such an extent that he would drop off into a sound sleep during his leisure moments, even in business hours.

On the 21st of June, 1885, the patient placed himself under my care. At this time he complained chiefly of dyspnœa on exertion, and of being exhausted before the business of the day was completed. There was slight pain in the back. An examination of the heart showed no disease of that organ to account for the dyspnœa. A trace of albumen was found in some specimens of urine examined, in others none at all. It was pale, with a specific gravity of 1016, and slightly below the normal quantity. The liver, spleen, and all the other organs were carefully examined, but no evidence of disease was discovered; and yet the patient was daily becoming weaker and weaker. On the 15th of July, in going from his store to his house, he was attacked with syncope and fell to the ground. At the suggestion of Dr. D. Campbell, who saw the case on the 21st instant, the patient was put on the arsenical treatment. We began by giving him one one-hundredth grain of arsenious acid three times a day.

July 23, the exhaustion was so great that he was unable to rise in bed. He seemed to be bloodless,—as if he had suffered from a profuse hemorrhage. The conjunctivæ were pearly white. The mucous membranes, the tongue, lips, and gums, were blanched. The skin was of a marble whiteness, and this abnormal color was most conspicuous where the normal vascularity is the greatest, as in the hands and face. The nausea was distressing. Diarrhœa alternated with constipation. At times undigested food was passed, showing the defective state of the machinery concerned in the process of assimilation. The temperature varied from normal to 101°. The mind was less active than in health. Conversation was fatiguing, and the patient was apathetic. Sleep was broken. Such were the more prominent clinical features of the case when the disease was at its height.

The first signs of improvement took place after pursuing the arsenical treatment some ten days, and consisted in improved appetite, the cessation of the pain in the back, better sleep, and in being more cheerful and talkative. The dose of arsenious acid was now increased to one-fiftieth of a grain three times a day.

August 9, my note-book reads: Lips show some color, especially the lower; mucous membranes less pale. At the time of my visit the patient had lain recently on his left cheek, and a distinct redness could be seen. Complexion not so pallid.

August 13, was taken with fainting while changing his clothes, but recovered in a short time. The superficial veins of the foot can now be traced to the toes. On pressure of the tips of the fingers, evidence of an increased vascular supply can be seen in the pinkish color that the part assumes.

August 26, the patient's strength had so far improved that he was dressed and ate dinner with the family. Appetite good, no nausea, no pain in back. Sleeps well, and is greatly improved as far as the quantity of blood is concerned.

September 1. Rode to his store. Appetite voracious.

September 14. Complexion has lost its whiteness, and the blood apparently has a healthy corpuscular richness. There has been a progressive gain in strength. Patient rides to his store almost daily, and superintends his business.

The case was reported to this date in a paper which was read before the Connecticut River Valley Medical Association, and published in the November number of the *New England Medical Monthly*.

The patient continued to improve through November and the fore part of December. During a portion of this time he was able to spend the greater part of the day at his store. He was cheerful; all the functions seemed normally performed, and convalescence almost completely established. The latter part of December, however, the patient felt more exhausted, had difficulty of breathing on exertion, was nauseated, and the same train of symptoms which before existed again developed. All these conditions grew more severe through the winter. The dislike for food was so great that by the middle of April about all the nutriment the patient could be persuaded to take was Wells, Richardson & Co.'s Lactated Food and an occasional glass of milk or cream. But he soon tired of this, and then Murdock's Liquid Food was substituted. He took this as long as he was able to take any dietetic preparation, and some of the time it was taken with relish. By this time he was not able to sit up much, but usually remained in bed till noon, and then would lie on a lounge. Hands and feet were inclined to become cold, and it required active measures long continued to warm them. A prickling sensation troubled the patient, to relieve which electricity was used. He did not respond to it normally. By the last of the month fissures began to appear on the lips and tongue. By the middle of May the mind did not show its usual clearness. Some evenings he was restless. Towards the last of May he had slight attacks of delirium, was so profoundly exhausted that he could not move in bed, vomited occasionally. Skin pale and blanched, like a dead person's. A few attacks of subsultus came on after exertion. Constipation, with occasional colicky pains, existed. On June 2 had a slight hemorrhage from the nose, and also œdema of the feet. Two days later he became drowsy, which gradually deepened into profound coma. In this state he died at 10 A.M. on the 7th instant.

Autopsy.—The thoracic and abdominal cavities presented a state of bloodlessness such as is seen in cases where the patient has died of hemorrhage. The lungs were mottled and white. The heart was of normal size, pale and flabby, with signs of fatty degeneration. This paleness and flabbiness were especially noticeable in the internal muscular fibres. The small quantity of blood found in the cavities of this organ looked more like water than blood. An ounce, perhaps, of serum gravitated to just below the base of the right lung. The kidneys were anæmic, and the cortical and medullary portion looked so nearly alike that it was difficult to distinguish one from the other. Nothing abnormal was noted in the form, position, or size of the spleen and liver. The stomach and intestines partook of the universal anæmia, were almost white, and abnormally thin. No organic structure showed signs of serious local disease or of malignant growths, but every tissue seemed drained of its blood.

The literature of progressive pernicious anæmia is scanty. Dr. Addison was the first to clearly describe the disease. This he did under the name of "idiopathic fatty degeneration" in his lectures delivered in 1843, but which were not published till 1853. In Guy's Hospital Reports for the years 1847–48 and 1857, Dr. Wilks reported a few cases. Gusserow, in 1871, observed six cases; and, one year later, Biermer reported fifteen cases at Zurich. He was then not acquainted with the writings of his English contemporaries, and hence thought he had discovered a new disease, giving it the name by which it is now generally known. The profession is deeply indebted to Dr. Sidney Coupland, the distinguished English physician, for his collection of one hundred and ten cases, which was made in 1881. These cases comprised all that the most careful research could find up to that date. In this country, cases are of occasional occurrence; yet I am not aware that any attempt has been made to collect them.

The etiology of the disease is unusually obscure. Sir H. Marsh mentions a girl who accidentally poisoned her father, and who was so overwhelmed with grief that she took to her bed, became anæmic, and died. In another instance, a gentleman saw a child run over in the street. He was never well after that event. Progressive anæmia developed, and death soon occurred. A child died in Guy's Hospital of anæmia who had not enjoyed good health since he was attacked by a flock of sheep in a field. The loss of relatives has been assigned as a cause in several cases. The well-to-do are as liable to suffer from the disease as the hard-working and impoverished. According to Addison, the disease is more apt to develop in those predisposed to fat. Dr. Fenwick has shown that serious structural changes of the stomach sometimes occur in cases of pernicious anæmia. Whether it is the cause of the disease or simply the result of the disease is not now known. Should future investigation show that gastric disease acts as a cause of this particular form of anæmia, it would throw light on the etiology of the case which has engaged our attention. For years our patient was troubled with atonic dyspepsia,

constipation, etc. The idea has suggested itself that, nutrition being abnormally performed, the special pabulum required for healthy cytogenesis was wanting in this case, so that the red corpuscles could not develop in proper numbers. Some observers claim that the disease is more common in middle life; others assert that it is more apt to develop late in life. The truth probably consists in the fact that a sufficient number of cases have not been observed to settle this question. The sexes seem equally liable to the disease.

The course in progressive pernicious anæmia is usually steadily downward. Often the diagnosis is not made till the disease has reached its last stage, so insidiously does it come upon its victim. Patients may live years with the disease; yet it generally runs its course in from six to twelve months. A few cases of complete recovery have been reported. It is worthy of note that these cases were hospital patients, and that as soon as they had regained a fair degree of health they were discharged as cured, and most likely lost sight of. It is not known whether they had a fatal relapse like our patient or not. They simply stand in the hospital reports as cured.

Arsenic has a specific action in this disease. The dose should not be large enough to produce constitutional symptoms; only its tonic and alterative effects are desired. Other remedies are indicated in the course of the disease, but no drugs should be rashly administered. Meddlesome drugging always does harm. The diet should be nutritious, and also easy of assimilation, and the hygienic conditions of the best possible character.

Gilsum, New Hampshire.

ERGOT IN THE THIRD STAGE OF LABOR, AND ITS INFLUENCE IN PREVENTING SEPTICÆMIA.

BY V. M. REICHARD, M.D.

THE text-books, as a rule, say that ergot may be given in labor previous to the birth of the child, though all advise certain precautions in its use. It were better, however, to adopt the rule never to give ergot in the second stage of labor. The numerous and grave complications which may arise in any case at any moment forbid the employment of a drug which may carry out of the accoucheur's hands the power to control the action of the womb. A man may—and such has been the case—use ergot regularly for quite a number of years with no serious results, and at last rupture a womb. Such a result may occur in any case; but how much more readily when the womb has been ergotized! In a recent case of which the writer knows, the woman had borne quite a number of children with no particular trouble. Ergot was given, and as a result the woman is dead and the child unborn! Such is the record.

By the pressure of the almost tetanically contracting uterus the child may be still-born and all efforts at resuscitation fail. Only a dead baby! and yet Mrs. Reybold was submitted to the perils of Cæsarean section two successive times to save the lives of babes unborn. To deliver a woman who is subject to uterine inertia is sufficiently easy without ergot. Its use in the second stage of labor should be abandoned entirely. Its risks, as compared with those of other procedures, are too great.

In the third stage, however, and in the post-placental period, it is an agent of the greatest utility. Those authors who are most chary about giving ergot advise its use when the head is about passing the vulva. This, however, may cause trouble. With an adherent placenta—and there are some men who find these cases are not extremely rare—the drug may cause such severe contraction as to interfere seriously with the operator or indeed imprison the placenta within the uterine cavity. The safest rule by far is not to give ergot until the placenta is in the vagina or escaping from the mouth of the womb. Given at this time and in full and sustained doses, too much cannot be said in its favor. It lessens or prevents after-pains; it hastens involution to a marked degree; and it reduces to a minimum the dangers of septic absorption.

In this latter direction I conceive lies its greatest usefulness. The situations most favorable for the absorption of septic organisms are the denuded placental site and the occluding thrombi in the mouths of the uterine sinuses. By securing firm contraction or hypercontraction both these dangers are met. The uterine cavity being emptied thoroughly and kept almost entirely in a state of tonic contraction, the

discharges are carried out at once, the placental site is reduced to the smallest size, and the thrombi have the serum forced out, thus diminishing their value as propagating media for septic organisms.

The facts bear out these assertions. I have found that women who are thus treated with ergot do better than those who are not. The temperature scarcely rises above the normal, and they are in better condition at the end of the lying-in period.

In a recent case in which the placenta was remarkably adherent, all judicious efforts failed to remove the entire placenta. The injury to the uterine surface by prolonging further the efforts at removal was judged to be greater than the danger of leaving behind a piece of placenta. The woman was given a drachm of ergot every four hours. In twenty-four hours the lochia were very offensive, and on the third day a goodly-sized piece of placenta was discharged in a putrid state. At no time was the woman's condition at all serious. I do not wish to be understood as saying that every effort should not be made to remove the entire placenta. But what I do say is that ergot will so seal the uterine absorbing surfaces that a putrid piece of placenta may be retained and no bad results follow. Whether it be only a coincidence or the effect of a cause, opinions may differ; but I am sure that since giving ergot to every woman immediately after the expulsion of the placenta my cases do a great deal better than before I commenced to give it.

To sum up: ergot should not be given until the placenta is under entire control; then should be given several doses in quick succession until the womb is well contracted and low down; and after this a drachm every four hours. The rapidly-repeated doses may cause vomiting, but I have never seen any bad results follow this. On the other hand, the womb seems to contract more forcibly.

FAIR PLAY, MARYLAND, July 31, 1886.

ARTIFICIAL CUCAINE. — Herr Merck, of Darmstadt, has succeeded in preparing an artificial cucaine which possesses all the properties of the natural product. Benzoic ecgonine is treated with methyl iodide and a certain quantity of methyl-alcohol at 100° Cent. Benzoic methyl-ecgonine is thus obtained, and this substance is cucaine.

THIRD STAGE OF LABOR WITH SPECIAL REFERENCE TO RETAINED PLACENTA.*

BY H. C. HENDRICK, M.D.,

McGrawville, New York.

IT is often the case that the skill of the physician is more severely taxed in the third than in the second stage of labor. In the treatment of the subject, this paper is not designed for an elaborate article, but only to direct attention to a few points in the management of the third stage of labor which seem to the writer to be of most practical importance, and interesting to the physician because common practice compels a degree of expertness on the part of every general practitioner. Guided by the books and journals, there is yet a wide difference in procedures among accoucheurs: for instance, Churchill tells us at the close of the second stage of labor, "the child rolled in flannel and removed, we may *proceed to apply the binder*, . . . when the patient may be allowed to rest awhile, if there be no flooding, after which, *when the uterus contracts*, gentle traction should be made by the funis to ascertain if the placenta be detached; if so, it may be removed by traction-pressure upon the uterus, etc. After the placenta has been removed, the binder may be tightened, if necessary."

Cazeaux (seventh French, fifth American edition) says, after entire separation of the after-birth, make moderate traction with a view of extracting it. As soon as any resistance is felt, pass two fingers of the other hand along the upper surface of the cord to the os uteri, directing traction at first at an angle with the vagina in line with entrance of upper strait; . . . when, however, tractions have no effect, all efforts should be suspended for the time being; and he adds, quoting Merriman, this seems all that is right to do for a full hour after the child is born, . . . and, generally speaking, we can have but little expectation that the placenta will be expelled by the natural powers after it has been retained more than an hour, and we can consider ourselves justified in interference to extract it.

Playfair makes the same quotation from Churchill concerning the binder as above

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* Read before the Second Annual Meeting of the New York State Medical Association, Third District Branch, held at Binghamton, New York, June 17, 1886.

for the purpose, and we think rightly, of condemning the practice; also he condemns the means of *traction by the cord*, and proceeds to advocate the delivery of the placenta alone by *expression*, or the "Credé method." Expression of the placenta from the uterus is by a *vis a tergo*, and not by a *vis a fronte:* when once the *knack* is learned there is little difficulty to be experienced. He says, for this purpose (the patient on the left side) the fundus should be grasped in the hollow of the left hand, the ulnar edge being well pressed down behind the fundus; and *when the uterus is felt to harden*, strong and firm pressure should be made downward in the axis of the brim of the pelvis; . . . that by this mode the uterine surface of the placenta is generally expelled first, the cord being within the membranes. He adds that in nineteen cases out of twenty, and *without touching the cord*, the bugbear of retained placenta will cease to be a source of dread. I should also have quoted to his credit continued grasp of the uterus ten minutes after expulsion of placenta.

Leishman is a general advocate also of the Credé method, but admits, at times, the desirability of combined traction by the cord.

Perhaps these four authors sufficiently represent the ordinary differences in procedure as taught and practised without further quotations.

1st. Churchill, in the application of the binder before any attempt to deliver the placenta. He advocates traction after an uncertain period of repose subsequent to the bandaging and *pressure* upon the uterus (which must be an exceedingly uncertain factor while the uterine globe could hardly be distinguished under the binder, and certainly could not be *grasped*,—a practice of which, it is hoped, none of us has any experience.)

2d. Delivery by traction alone, as recommended by Cazeaux.

3d. The Credé method as described by Playfair,—by expression alone.

4th. Expression reinforced, when necessary, by traction, as by Leishman.

Cazeaux and Playfair represent the extremes in modes of rendering aid.

There is tolerable agreement with those authors as to *waiting* for active uterine contractions to be resumed after close of the second stage before interfering, but with suggestions that after sufficient time has elapsed to endeavor to excite uterine contractions by friction; yet what may be sufficient time is left quite uncertain, while that delivery of placenta is usually effected in from fifteen to twenty minutes to an hour and a half. *Casual* writers vary very much in their ideas as to proper time of waiting, many of late advocating efforts towards immediate delivery.

As stated, when assistance is rendered, Cazeaux and Playfair represent opposite extremes of modes of action. The adage that the "truth usually lies between the two extremes" is not far amiss here.

We wish to give our experience, which has been that of the ordinary village and country practitioner, with an obstetric business equal to the average for one-third of a century; and during the past one-quarter of a century we do not recall a case, in our own practice, of the third stage of labor, at full term, exceeding twenty minutes,—unless the time was necessarily consumed in some extra care for the child,—and *never* a case of fatal hemorrhage: generally the time occupied from birth of the child to delivery of the placenta has been within ten minutes.

Our custom has been to proceed, without essential delay, by expression, with gentle, guiding traction. Quoting again Playfair, in his advocacy of the Credé method,—"that in nineteen cases out of twenty, *without touching the cord*, the bugbear of retained placenta will cease to be a source of dread."

We will add that the same will be true in ninety-nine cases out of the one hundred—and many times better still—by what we may call the Credé and Cazeaux methods combined, which we have essentially practised for many years. We will give the procedure in detail. We prefer to have the placental end of the cut cord ligated, to retain all the blood, and which may aid in the separation of the placenta. Immediately after tying and severing the cord and due attention to the child, with the woman lying upon her back, wind the cord about one hand and third and fourth fingers,—or fingers alone, if the cord be very short,—until the hand is brought in close contact with the vulva; the first and second fingers are carried along the upper surface of the cord to the placenta or os uteri, thereby one hand serving all the purposes of two, as illustrated in the

traction method of Cazeaux; the other hand over the uterine tumor, its ulnar side deflected, with the fingers carried as well back and around the uterus as possible, while the thumb and thenar eminence serve to antagonize and secure the most efficient possible and uniform grasp of the tumor.

By this time, usually, the womb is ready to respond; and when it responds the grasp is tightened, with a pressure bearing the uterus in the direction of the axis of the superior strait, meanwhile giving direction and slight traction by the cord. At the same time the *patient* is directed to "bear down," or, what is better, to place the palm of her hand tightly over the mouth and blow against it with all her might, and with it is sure to come the straining effort; and here let it be said and emphasized that pressure by inflation of the lungs—forced inflation—is worth more as an adjuvant expulsive force than all others combined. The leading feature of all, however, is the peculiar, expressive grasp of the uterine tumor, which perhaps cannot be fully told, but must be comprehended by the physician himself,—a sort of tactile sense that assures him he is aiding the uterus in its contraction and expulsion of its contents,—a sort of peristaltic squeeze, the position of hand aiding both in excitement and direct expulsion. Usually the work is completed with the first uterine pain, which is greatly encouraged and prolonged by the blowing efforts of the patient. Labor is over and the "bugbear of retention" gone by; but the grasp of the uterus, to prevent hemorrhage, is *still maintained*, without interruption, for some minutes,—longer or shorter, according to the tone of contraction; and the dose of ergot at this time is a source of safety. Generally, I would not rely upon it as an aid in the third stage of labor; nor do I give the full dose in the close of the second stage to secure contraction of the womb, as is the custom of some, unless measurably sure of completing the third stage ahead of its specific effect, lest it should bring on spasmodic contraction of the womb, which is one of the fruitful sources of retention of placenta.

One thing should have been mentioned, that is respecting the varied positions of the placenta assumed in the different modes of delivery. In the traction method the root of the cord and fœtal surface appear first; by expression alone generally the maternal surface is expelled first; in natural or unaided expulsion it usually descends by one edge, occupying less space in the os uteri and less room laterally in the vagina. The latter or natural position of the placenta in its descent is quite generally maintained, and nearly always when *well-balanced* aid by expression and traction is combined. Its naturalness recommends it; its success is its advocate.

If with well-directed efforts, by whatever method, the after-birth is not delivered, when shall we call it retained placenta? and what shall be done? Authors seem to make the time from half an hour to an hour and a half. We believe the latter time long enough to wait. Our experience is confined only to a few cases when called in consultation when more than this time, by force of circumstances, had elapsed; and artificial delivery, either with or without the use of an anæsthetic, was proceeded with at once with successful terminations,—one of these a cross spasmodic contraction of the whole uterus.

We believe there is nothing gained by delay, as has been done for days and weeks, but much lost. The adhesions seldom diminish. The patient, until the secundines are delivered, cannot repose; she is in a constant state of anxiety; there can be no real advance in recovery. The physician must hold other practice in abeyance to this case; he is harassed by day and by night by an impending danger from hemorrhage or septicæmia or both. There seems to be little prospect of gain by waiting. The uterus is in its nearest physiological condition at the time of the birth of the child; its inherent contractility of tissue is then alive to every exciting cause. If there be inertia present, the necessary manipulations will excite and draw the forces of the system to the part and overcome it, while the longer the delay the more tolerant is the womb to the presence of a foreign body: so to speak, it accepts its partial relief by the birth of the child from overdistention with satisfaction, and rests itself, unwilling to be disturbed.

We do not intend to pursue the subject of procedures in retained placenta, at term, in this paper to any extent. You may criticise the writer without an ex-

tended experience for presenting it, which is just the reason (want of experience) why it is presented. If any one with an extended personal knowledge and practice in cases of retained placenta can point out a better way than to avoid having them, it will be interesting information.

But there is another class of cases of retained placenta, a class of which doubtless we all have had more experience and annoyance than desired, and which might more properly come under another title,—*treatment of abortion*,—which we choose to bring under consideration at this time. Unfortunately, the rules for securing the expulsion of the placenta at full term or period of viability do not come materially to our aid here.

It is known that in abortion prior to the close of the second month of gestation the fœtus and secundines are usually expelled together, and if not, the latter are so small as ordinarily not to be a source of much danger even if not interfered with, but subsequent to that time until viability is a period causing the physician a deal of trouble. The placenta compared with the fœtus is proportionally of large size and of close attachment to the uterus, and inclined to adhere, as naïvely expressed by one of our patrons in a retention case of his wife: "I tell you, doctor, the trouble is, the thing isn't *ripe* yet."

It is rather the rule than otherwise, at this period, that cases are watched and time given them, but both patient and physician are filled with anxiety. There are oft-recurring and dangerous hemorrhages. There are bad odors, sometimes septicæmia, and always danger of it. Seldom is a case permitted to continue without some of these untoward features, while the treatment is apt to be confined to such efforts to obtain the placenta as can be achieved by one or two fingers, and ergot, which seldom succeeds in either bringing away the after-birth or materially checking hemorrhage, and, so failing, further measures are confined to the use of deodorizers, antiseptics, and the tampon if compelled to it, until nature, seemingly disgusted with itself, if not with the doctor, rouses at last and expels the foul offender, or, failing, it passes away in sickening discharges, or possibly it is rarely absorbed.

The writer confesses these delays too much the habit of his own practice in earlier professional life, but of late years I rarely wait a quarter of a day, and often not an hour. Having of late years a business copartner, hence a colleague easily at hand as an aid, I now proceed at once to remove the placenta artificially. In doing so, administer an anæsthetic, carry the hand into the vagina, remove the placenta. The results have been satisfactory.

Gentlemen, the manner of a majority of these cases coming to us for aid is known too well. The result of criminal practices on the part of parents even in wedlock, or of unfortunate girls under instruction or by the hand of professed abortionists, with the advice that when in trouble call upon a good physician. We sometimes question the responsibility of the physician to respond to such cases, but often we are brought to the bedside unconscious of the nature of the case until the moment is imminent. Quicker than can the question arise the doctor's sense of duty to human life has decided his action. The question with us here is not what cases it is our duty to attend, but how to do our duty well.

In the résumé of our subject concerning the third stage of labor, we would recommend ordinarily (1) that efforts to deliver the placenta should be made within the first ten minutes following the close of the second stage, believing the vigorous uterus more responsive then than at a later period.

2d. That the application of the binder prior to the delivery of the placenta, except in inertia of the womb, and delay when the accoucheur could not remain by the side of his patient, is not only useless, but a hinderance.

3d. That neither mode, of traction alone or expression alone, is the most efficient or desirable means of aiding in the delivery of the after-birth, but if either mode alone is to be adhered to, that of expression has the advantage over traction in being the more efficient in completing this stage of labor, and also in preventing hemorrhage.

4th. That the best method known is the proper combination of the two methods (traction and compression) combined, keeping in remembrance that there is a vast difference between pressing the uterus and compressing or grasping.

5th. Never neglect maintaining the firm grasp of the uterus for a period of some minutes following the descent of the placenta.

6th. That the best treatment of retained placenta is to not have it,—but, having it, to proceed with artificial delivery as soon as practicable; better use the most efficient means that can be deemed judicious than to leave the patient with the greater risks of hemorrhage, and a subject of adynamic and ataxic fever.

7th. The best treatment of retained placenta in abortion is to "go for it" as promptly as possible.

DISCUSSION.

Dr. C. W. BROWN: I have been much interested in the doctor's paper, and will take up but a very short time. I agree with his methods recommended for the delivery of the placenta, mine being about the same, with an exception that I will mention. As regards the time, I usually, as soon as the child is taken care of, proceed to deliver the placenta without regard to time. I place the left hand over the fundus of the uterus, grasping it as has been described, making a gentle kneading motion, and pressing as much as I am able to on the fundus of the womb. Instead of grasping the cord, my custom has been to follow up the cord, using it as a guide to the nearest edge of the placenta, and then to gradually work under the edge of it to excite contraction of the womb. I wait a reasonable length of time for the natural uterine contraction, and then, when that occurs, use the pressure on the outside and the fingers near the nearest edge of the placenta, and as the womb contracts and the placenta begins to come down I roll it on itself, so that it comes edgewise. Instead of pulling at the centre on the cord, like an umbrella towards the wind, I bring it down rolled up, without reference to the position of the cord. I believe that this is an important thing, and my experience has been that I have had no trouble whatever in delivering the placenta in a large number of cases.

Dr. ELDER: I have thought of the matter of delivering the placenta, and I have never had any trouble by retained placenta. There is one thing I have never done: used a forcible inspiration to fill the lungs with air. But I have tried to use forcible pressure. As to winding the cord about the hand and following it up, I have found it to result very satisfactorily.

Dr. JEWETT: What has been said is so nearly sound, that retraction would be out of place. I hardly agree with placing a ligature upon the placental extremity of the cord. It would seem to me that it would prevent the placenta from disgorging; it is more bulky and difficult to remove. It seems to me that there is always a great advantage to allow the blood to escape, all that possibly could, from the placenta; you have less to remove, and I think it passes easier. I have never, except in a case where I knew there was a second child, applied a ligature to the placental extremity of the cord.

Dr. JOHNSON: In addition to the method of removing the placenta in what is called "unbuttoning the placenta," I always about at the end of twenty minutes before the birth of the child, as near as my experience would allow me to guess at it, administered a dose of ergot to secure the uterine contraction and avoid uterine inertia. I think I have helped the patients in that way and promoted the third stage of labor. I do not know whether it is customary with others or not, but that has been my custom almost invariably. And in my experience of twenty-five or thirty years I have never had a case of retained placenta where it has been retained over twenty minutes or half an hour.

Dr. HENDRICK: I deem it perfectly safe always to tie the cord, and sometimes an advantage. Usually it makes no difference. More generally the placenta is detached in the last effort of the uterus, and lies in the uterus; and, if so, disgorgement has already taken place; if not, the tying of the placental end of the cord serves to retain the blood, it is neater so far as the bed is concerned; and it is an acknowledged mode of aiding in the seperation of the uterus if there is anything like adhesion; and that is the reason why I would do it. As to the giving of ergot twenty minutes before the expiration of labor and the birth of the child, I would not do it. I would be afraid of retained placenta, if given so early as that. Twenty minutes before the expulsion of the child is a very uncertain period. There may be many long weary hours before the child is born. That sudden action of the uterus is apt to throw it into a spasmodic contraction on the whole body, or an unequal contraction, which is one of the means of causing retained placenta.

REPORT ON OPHTHALMOLOGY.

BY ALBERT G. HEYL, M.D.,

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EXPERIMENTAL RESEARCHES WITH COCAINE.

WÜRDINGEN has made investigations as to effects of cocaine upon the eye, with the following results:

1. With reference to the corneal changes after cocaine-instillation noted by A. Graefe, and supposed by him to be an epithelial defect. The observation has been repeatedly made by others, and Würdingen has studied the corneal changes on

rabbits, dogs, and guinea-pigs. Several drops of five-per-cent. solution of cocaine were dropped into each eye. The one eye was kept open, the other closed. In three or four minutes the first symptom of corneal change was observed, and in about twenty-five minutes the whole superficial surface of the cornea was uneven and of a bluish tint. The surface was not defective, as the normal corneal reflex was preserved and no loss of epithelium could be detected. When, under these conditions, a drop of the cocaine-solution was allowed to fall on the cornea, it flowed over it like water over a greased surface. In the course of an hour the clouding had become so great that the iris could not be recognized. This appearance took place in the eye in which the lids were kept open. In the closed eye the cornea remained perfectly normal, showing that the closure of the lids exerted an important influence.

The repeated instillation of distilled water, as likewise the tears, seemed to prevent the extension of the corneal cloud without clearing up the tissues already affected. It seems that the corneal change is a sort of drying process of the superficies of the cornea, resulting from the conjunctival anæmia. To determine whether there was deficiency of lymph in the corneal parenchyma, the fluorescent solution of Pflüger was used. The solution was dropped in one eye which had been cocainized and in the other which was free from cocaine. In the non-cocainized eye a very slight and uniform fluorescence was observed in the anterior layers of the cornea. In the cocainized eye the coloring took place in spots which coalesced, the parenchyma of the cornea being colored. Similar results were attained with methylene blue. In another experiment the corneal epithelium was scratched away and the methylene blue employed. In the non-cocainized eye only the point scratched was colored, while in the cocainized eye almost the whole parenchyma of the cornea was deeply tinted. This the author thinks indicates a deficiency of lymph (*lymph-armuth*) in the corneal parenchyma from the action of the cocaine.

The microscopic examination of cocainized corneas shows that shortly after the instillation the epithelium is not changed, although the cornea to the unaided eye is uneven. Later on the epithelium is pathologically changed, and a partial casting off of the cells may occur. It is worthy of note that the same corneal changes occur when the cocaine is subcutaneously injected instead of being instilled into the eye.

Finally, the author shows that weak corrosive-sublimate solutions, borax and boracic acid and salt solutions, which have no effect on a non-cocainized eye, if dropped into a cocainized eye induce more or less intense clouding of the corneal parenchyma, which recall the streaked keratitis sometimes seen after extraction. —*Klinische Monatsblätter*, April, 1886.

ARTERITIS SYPHILITICA RETINALIS.

Haub describes the following case. Retina of one eye clouded, in its temporal half thickly strewn with hemorrhages. Here and there in this region fine white lines were observed, corresponding to the branches of an artery in the wall of which numerous shining white spots were observed. In places the spots had united, causing the vessel to appear entirely white. Complete occlusion of the vessels seemed to occur only in the arterial branches, and in the part of the retina where this occurred the hemorrhages above mentioned were seen, and were suggestive of retinal infarction.—*Centralblatt*, April, 1886.

EYE-SYMPTOMS IN ACUTE MYELITIS.

Knapp reports the following case. A man, æt. 32, apparently healthy, with history of syphilitic infection eight years previously, applied for treatment for amaurosis of gradual approach and which appeared simultaneously with an ascending bodily paresis commencing in the toes. On the fifteenth day of the attack a nuclear paralysis of the eye-muscles appeared, and on the seventeenth day bulbar paralysis, of which the patient died on the twenty-first day. Large doses of mercury and potassium iodide had no effect on the disease. The autopsy showed distinct hyperæmia of the meninges of the cord; copious discharge of turbid fluid on making incision; dorsal and lumbar sections of the cord softened; the cervical of normal consistence, but changed in color; subarachnoid fluid of the brain increased in quantity, and the pia mater of the base hyperæmic. The chiasm, optic tract, and nerve seemed swollen, soft, reddish gray. The microscope showed almost everywhere hyaline thickening of the intima of the

arteries with narrowed calibre; while the veins were distended and filled with blood. —*Archives of Ophthal.*, March, 1886.

CHANGES IN THE EYE IN SEPSIS.

Burgen, in a series of cases of puerperal fever, found without exception changes in the fundus of the eye. The following are some of the conclusions.

1. Retinitis septica appears both in the phlebitic and in the lymphangitic form of puerperal fever. Similar appearances are observed in connection with nephritis, diabetes, leucæmia: hence this form of retinitis cannot be considered an essential symptom of puerperal fever.

2. In panophthalmitis we have another affection of the eye which may occur in connection with puerperal fever. We may distinguish two different classes of cases.

(*a*) Cases in which the starting-point is suppurative choroiditis. This, if not of traumatic origin, is always indicative of septic disease, and in many cases of ulcerative endocarditis.

(*b*) Cases in which the retina is the starting-point, the choroid being secondarily involved. This starts as an embolic inflammation of the retina, leads to suppuration of the latter, and secondarily involves the vitreous and choroid. It indicates always sepsis, and perhaps without exception ulcerative endocarditis.—*Archives of Ophthal.*, March, 1886.

TENOTOMY IN MUSCULAR INSUFFICIENCY.

The following is taken from the report of the French Ophthalmological Society. Landolt asserted that the effect of tenotomy depends upon the amount of incision in the conjunctiva and of separation of the tissues attached to the muscle. In performing this operation, he made a horizontal incision in the conjunctiva about at the point of insertion, passed one blade of the scissors underneath the tendon, and thus separated the muscle from the sclera without the aid of a hook. Javal remarked that in divergent squint, when the diverging eye was amblyopic, it was better not to aim at a momentary complete reduction of the squint by the operation, but to leave some convergence, because later a certain amount of divergence would ensue. When both eyes possess good vision, the binocular visual act aids powerfully the result of the operation. Abadie did not think Landolt's method advantageous; it was much better by a vertical cut in the conjunctiva to expose the tendon of the muscle. In many myopes the tenotomy of the externus seemed to have a favorable effect upon the progressive character of the disease and the intra-ocular changes. Javal contended against the occurrence of insufficiency. When the refraction error was corrected the insufficiency vanished.—*Centralblatt f. Augenheilk.*

EYE-BALL TRANSPLANTATION.

The attempt of Chirbret last year to introduce the eye of a rabbit into a human orbit and obtain union between the rabbit sclera and the human conjunctiva is one which has excited interest in the profession and the community at large. The following experience of Pierd'houy is of value in connection with the subject. The patient, aged 25, had lost the right eye from variolar keratitis. Enucleation was deemed necessary, owing to the irritable state of the other eye, and was performed without anæsthesia. The four eye-muscles (recti?) were each secured by a suture, likewise the stump of the optic nerve, and these appropriately secured to the eye of a rabbit which had been introduced into the socket. The eye was bandaged for three days, and at the end of that time examined. The cornea was perfectly clear at this time, and slightly sensitive to touch. On the sixth day the cornea began to cloud; on the ninth day there was a central ulceration; on the eleventh day, corneal perforation and prolapse of the iris; on the fifteenth, escape of the lens and loss of vitreous. The collapsed ball, however, remained attached to the conjunctiva of the patient, forming a movable stump for an artificial. This was the result between two and three months after the operation.—*Klinische Monatsblätter*, April, 1886.

[There seem to be indications that the above operation is being repeated more or less extensively. It is unwise, perhaps, to say that the results aimed at in the operation are unattainable, but it is probable that the time and thought which already have been expended on this subject would have been much better employed in the endeavor to elucidate some of the many obscure questions which confront the oculist in connection with ordinary diseases of the eye. It is probably a fact that the reports of operations which belong in the same category as this of Chirbret's exhibit a

strong bias towards bringing forward the most favorable aspects of the results, and such results are to be received with caution. The case recorded above seems to be fairly stated. A point worthy of note is that at the end of three days the cornea was perfectly clear and slightly sensitive to touch. It is conceivable to the reviewer that such might be the case, and, if so, it may have an important practical bearing. If the above observation be correct, it tends to show that a transplanted eye may receive nutriment from the vessel of scleral, conjunctival, and episcleral tissue, and hence we have a practical suggestion for the treatment of corneal staphyloma, etc. But when we consider the manner in which the posterior segment of the ball—viz., that enclosing the vitreous—receives its nutriment, *i.e.*, by single vessels which perforate the sclera, it seems impossible that by any fortuitous combination of circumstances a transplanted eyeball could live, even if placed never so carefully in its new position.—H.]

THE OCULO-PUPILLARY CENTRES.

Katschanowski has placed on record the results of a series of experiments carried on in the pathological laboratory of the University of Vienna, with reference to the position of the centres governing the pupil-diameter. After a résumé of what is known with regard to this subject, including a reference to the discovery of the cortex centres by Fritsch and Hitzig in 1870, and the point located later by Ferrier on the anterior convolution of the gyrus sigmoideus, Katschanowski describes his own experiments. These were performed on morphinized dogs: the skull-cap was extensively removed, the motor cortical areas examined, and then the lateral ventricle opened to get at the basal ganglia. The principal results are as follows. In the anterior section of the anterior convolution of the cortex is a centre which, when irritated, gives rise to dilatation of the pupils,—*i.e.*, if either centre be irritated both pupils dilate. The same thing resulted from irritation of the head of the corpus striatum. Section of the vago-sympathetic in the cervical region (the vagus and sympathetic in the dog run in the same sheath) prevented the pupil-dilatation from the above-mentioned irritation on the same side; section of the oblongata prevented the dilatation on both sides; therefore the irritation of the motor centres which dilates the pupils travels *via* the medulla oblongata. Irritation of one of the posterior quadrigeminal tubercles produces pupil-dilatation in each eye; this also occurs *via* the medulla, as experiment shows. The pupil-centres of the cortex and corpus striatum are, however, independent of the posterior quadrigeminal tubercles, as the latter can be destroyed without impairing the function of the former.—*Klinische Monatsblätter*, April, 1886.

EFFECT OF LIGHT ON THE RETINAL ELEMENTS.

The interesting experiments of Engelmann with reference to the effect of light on the retinal cones have been already given in this journal. Gradenigo has reported a somewhat analogous effect with reference to retinal rods. The experiments were performed on frogs. The rods as well as the cones are connected with the granules of the outer granular layer, under the influence of light. Gradenigo reports that the filaments which unite the granules with the cones become shorter and thicker, while the granules, instead of remaining round, become oval. An interesting point brought out is that the temperature of the organ is a very important element in effecting these changes. Frogs were shut up for a long time in the dark and then both eyes enucleated,—the one examined in ordinary temperature and the other after having been exposed to a temperature of 30° to 35° C. In the warmed eye the same changes were observed in the retina as from the effect of light. [This seems to point out that the *heat* of the *sunlight* exercises an important influence on the retinal elements.—H.] Gradenigo thinks the above-mentioned changes may possibly, with the aid of more complete methods than are at present known, be traced into other constituents of the retina in which as yet they have not been observed.—*Klinische Monatsblätter*, March, 1886.

SCINTILLATING SCOTOMA.

Adolf Alt thus describes this condition as experienced by himself. For three weeks he had been feeling unwell, with loss of appetite and diarrhœa. One morning while riding over a snow-covered road in bright sunlight, he suddenly noticed a bright-yellow shining crescentic figure before him, apparently at a distance of five feet; it was projected from the retina a

little to the left of the fixation-point. Five minutes later, in his office, he carefully tested the condition of the eyes. The figure had become a little smaller; on the edge now appeared prismatic colors, yellow and blue predominating. The vision had fallen to $\frac{2}{50}$. The test-letters seemed to be in constant motion from right to left. He began to feel a little faint. He recovered in a few minutes through the help of a glass of wine. The crescent increased in size, became fainter, and finally vanished entirely.—*Klinische Monatsblätter*, June, 1886.

TRANSLATIONS.

Vaseline in Articles of Food.—The substitution of vaseline for butter or other fats in preparing articles of food, such as pastry, was recently condemned by the Council of Hygiene and Public Health of the Seine as a dangerous falsification. In order to obtain some light upon the effects upon the organism, and whether or not it possesses toxic effects, M. R. Dubois made some experiments upon two dogs with large doses. They were fed exclusively upon soup in which ordinary fat was replaced by vaseline. The amount consumed in ten days was four hundred grammes, which would in a man of average weight be equivalent to from sixty to one hundred grammes daily; therefore a much larger quantity than would be likely to be eaten in pastry. No marked change in the dogs was observed. Although deprived of fat and meat, their weight scarcely varied; if anything, they had gained. Their general condition was good; there was no loss of appetite, vomiting, nor diarrhœa; the fæcal discharges were semi-solid and yellowish; the rectal temperature was unchanged; thirst was not exaggerated; the urine was free from albumen and sugar; the quantity of urea, however, was very small. It should be observed that the only nitrogenized aliment which they received was the gluten of the bread, which contained a small proportion. Therefore we may conclude that the heavy petroleum products known to commerce as vaseline, in spite of the fact that they are not readily oxidized and are not saponifiable, are well tolerated by the digestive tube, and that they are without toxic effects, even in relatively large doses and when continued for some time.—*Journal d'Hygiène.*

The Function of the Prostate Gland.—In a paper read before the Berliner Medizinischen Gesellschaft, Professor Fürbringer, of Berlin, discussed some of the physiological and clinical relations of the prostate gland. Its secretion is a thin, more or less milky fluid, apparently an emulsion, though not of fat, but of granules containing lecithin or something resembling it. This secretion is an integral portion of the ejaculated seminal fluid; it gives to it its specific odor, and it contains a salt of phosphoric acid which causes the development of the so-called spermatic or prostatic crystals.

Professor Fürbringer has discovered another property of the prostatic secretion in stimulating or calling into activity the organic elements of semen; and he believes that in the vesiculæ seminales and ducts the matured spermatozoa lie in a dormant state, from which state they are aroused into active movement by coming in contact with the prostatic secretion. In cases of atony of the ducts in neurasthenia spermatorrhœa may exist, the discharge being free from admixture with prostatic fluid. The microscopic appearances are of the character above indicated, the spermatozoa being motionless or ceasing to move within a short period after ejaculation. By properly directed local and general treatment the patient may entirely regain his normal condition. This occurred in a case reported by the writer of the paper. A knowledge of this may protect from an unfavorable prognosis based upon microscopical examination alone.—*Berliner Klinische Wochenschrift*, No. 29.

Vinegar as an Antiseptic in the Treatment of Diphtheria.—Dr. Engelmann (*Centralblatt für Klin. Med.*, No. 14) uses vinegar, either the officinal dilute acetic acid or ordinary cider vinegar, diluted with an equal quantity of water as a gargle, or undiluted applied upon a brush. It is also used in spray diluted once or twice. It is antiseptic, not caustic, and has a more agreeable taste than many of the antiseptics usually employed.

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 4, 1886.

EDITORIAL.

THE TREATMENT OF STERILITY IN WOMEN.

THE rational treatment of female sterility is based upon a knowledge of its causation. In anæmia, chlorosis, or scrofulosis reconstructive medication is required. Amenorrhœa, if the generative organs are normal, may yield to local stimulating applications, such as scarification of the cervix, introduction of the sound or of stem-pessaries, vaginal douches, hot foot- or sitz-baths, galvanism or faradic electricity; aided by aloes, apiol, or permanganate of potassium used internally. In the amenorrhœa of corpulent women, Kisch, Martin, and Röhrig extol the sulphate-of-soda waters, among which those of Marienbad have a high reputation. In this country the waters of Crab Orchard Springs in Kentucky,* Bedford Springs in Pennsylvania, or Ballston Spa in New York would probably be equally efficacious.

In endometritis, applications of tincture of iodine or of iodinized collodion to the internal surface of the uterus are often effective. When villous endometritis is present, or the uterus still contains remnants of a previous conception, the dull curette is indicated. In peri- or parametric exudations, hot-water vaginal douches and iodoformized tampons are useful.

Catarrhal diseases of the vagina must be treated with astringents. Kisch relates a case in which there were profuse hyperacid secretions. He directed injections of a fifteen-per-cent. solution of sugar to which one-tenth per cent. of caustic potassa had been added. In this solution the spermatozoa remain active for a long period. The woman became pregnant after using this injection for some time. Charrier found in two similar cases that the daily injection of a solution containing one part of albumen, with fifty-nine of phosphate of soda, in ten thousand of water, removed the acidity of the secretion, and the women conceived in the course of six weeks, although during four years of married life they had been sterile.

Gonorrhœa should be treated with germicide irrigations. The most effective are nitrate of silver (one to three thousand —one to two thousand), salicylate of sodium (one to twenty), corrosive sublimate (one to twenty thousand).

In atrophy of the uterus the galvanic and faradic currents may be used with some hope of benefit.

Vaginismus demands a careful consideration of each case. Recently cocaine in four-per-cent. solution painted on the vulva and vagina has been found effective. If this fail, operative measures (dilatation under anæsthesia and subsequent wearing of a plug) may be resorted to.

In cervical stenosis, dilatation with tents or incision may be employed. The former method is warmly advocated by Schultze. If rigid instruments are used, the solid round dilators of Peaslee or Hegar should be chosen. The dilating instruments which act by a separation of two or more blades are by Kisch considered inappropriate. In hypertrophy of the cervix, amputation is proper; in laceration, Emmett's operation.

Atresia of the vagina does not demand treatment in the absence or defective development of the other internal generative organs.

Displacements should be appropriately treated by manual reposition and pessaries or tampons.

The accepted opinion among physiolo-

* The Crab Orchard Salts may also be used at home, doubtless with good effect.

gists is that the most favorable time for conception is two or three days before the beginning, or five to eight days after the cessation, of the menstrual flow.

Kisch does not advise attempts at the artificial impregnation of the human female, as practised by Sims and some of his followers. He closes his very interesting monograph* with the caution to the physician not to be too ready to give either a favorable or an unfavorable prognosis. In the former case he may be mistaken and disappointment follow; in the latter he may likewise err, and his judgment will then be discredited in other things.

THE PURIFICATION OF DRINKING-WATER.

IF health under modern social surroundings were conditional upon the absolute purity of the water-supply, it would be hopelessly unattainable, since in its natural state water is always more or less contaminated with organic and inorganic impurities derived from the surrounding air and soil. *Per contra*, experience has abundantly shown that a considerable amount even of organic impurity may be present without notably affecting the health of those who use it. Chemical analysis, unfortunately, fails to discriminate between apparently harmless organisms, which are almost always present, and others of specific source the presence of which in drinking-water constitutes it an infected supply capable of originating epidemic outbreaks of disease. This was incidentally referred to in Major Smart's paper "On Wholesome Water for Cities and Towns,"† but has been more pointedly discussed in the recent paper by Dr. Formad.‡ By the use of cultures and the microscope alone are we enabled to pronounce with any degree of certainty upon the character of water, although in the presence of an epidemic of certain zymotic diseases we may have good grounds for viewing the water-supply with suspicion.

The advice is usually given under such circumstances to use only boiled water for drinking or culinary purpeses, and experience has proved the value of this expedient. But mere elevation of the temperature of water to the boiling-point is not sufficient to sterilize the contained germs, for ordinary fungus may survive it (Heisch), and the vitality of the spores of several forms of pathogenic micro-organisms were not destroyed by it in some experiments made by Cohn and Klein. Prolonged boiling, however, from ten minutes to half an hour, was found to free the fluids from them completely. The purification of water may also be accomplished by filtration through freshly-burnt wood charcoal or spongy iron (Parkes). It would be but reasonable to suppose that boiling followed by such filtration would, for all practical purposes, be deemed sufficient to purify water from an infected source.

In order to prevent subsequent contamination from the use of impure ice, the additional precaution should be taken, where the ice is not free from suspicion, of cooling it by placing ice around the water-vessel, or, where a refrigerator is convenient, keeping the carafe upon the ice instead of dropping ice into the water. We have observed these precautions in hospital and private practice in cases of typhoid fever, dysentery, and gastro-intestinal catarrh with results which have justified the slight amount of trouble they have required. In typhoid fever especially, we feel assured that the purification of the drinking-water is an important part of the dietetic treatment of the disease. In case of an outbreak of cholera we should adopt the same prophylactic measures, with confidence that they not only form a valuable

* Die Sterilität des Weibes. Vienna and Leipsic, 1886.

† See page 697, *ante*.

‡ "On Microscopic Examination of Water." Read before the Sanitary Convention held under the auspices of the State Board of Health of Pennsylvania, at Philadelphia, May 13, 1886.

adjunct to the treatment, but if generally adopted will go far towards preventing the spread of the disease.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

July 28, 1886.

A KEEN sense of sorrow has been excited throughout the profession by the announcement of the death of Dr. Walter Moxon, one of the physicians to Guy's Hospital, and joint author with Dr. Samuel Wilks of the well-known manual of "Pathological Anatomy." Dr. Moxon had passed a busy day, engaged in discharging the duties of his extensive private practice and at the hospital, and during the evening he acted as *viva voce* examiner at the Royal College of Physicians in London, where the final examinations for the L.R.C.P. were then in progress. From the college he proceeded to his consulting-rooms in the city, prior to returning for the night to his private residence in the suburbs. As he failed to reach home at his customary hour, a messenger was despatched in search of him soon after midnight, and about two in the morning he was found lifeless on the floor of his own consulting-room. His loss is one that will long be felt, and nowhere more than at the meetings of the medical societies, where his exceptional abilities as an eloquent, humorous, and at times caustic speaker were held in very high appreciation, while his vast learning as a physician made him one of the most eagerly anticipated participants in the discussion of obscure or difficult subjects.

In connection with this latest blow, the mind is irresistibly led to reflect on the very considerable number of losses which have been sustained within the last few years by the younger ranks of the profession,—of men just in the prime of life, with a brilliant record of work already done and giving promise of still more valuable performance in the future. How easily, alas! does one recall the names of Hilton Fagge, of Mahomed, of Francis Mason, of Royes Bell, and now of Moxon! Their death has more of pathos in its surroundings than that of the aged veterans whose burden of years precluded them from aught but the enjoyment of that repose to which their labors had entitled them. For the latter we must mourn indeed, but the poignancy of grief is tempered by the knowledge that the grave closes over them in the fulness of time; whereas there is mingled with the sorrow that is felt at the death of younger men a sense of the irretrievable loss to science and to humanity that is entailed by the sudden stoppage of the work that each had in hand, and that he alone could bring to full fruition. The mystery of life and death is impressed upon us at such a time as this with redoubled force.

Notwithstanding the exceedingly doubtful nature of its prospects in the late Parliament, the Medical Acts Amendment Bill of 1886 was finally among the few measures that passed both houses and received the royal assent previous to the dissolution in June. The new act does not present itself in any more attractive light on being more closely inspected as a statute of the realm. It is true that it adds five members to the General Medical Council as representatives of the class of general practitioners, three being allotted to England and Wales and one each to Scotland and Ireland. But what it gives with one hand it takes away with the other, for the concession of direct representation is more than counterbalanced by the undue influence over the affairs of the profession with which the Privy Council is endowed by the act. This august body is practically constituted a court of appeal from the decrees of the General Medical Council, and is empowered to insist on having its decisions carried into execution by the latter body. There are, however, two good clauses in the measure. The one enacts that no person shall henceforth be licensed to practise who has not passed a satisfactory examination in all three branches of the profession,—viz., medicine, surgery, and midwifery; and this will have the effect of compelling the King's and Queen's College of Physicians in Ireland to add to its list of subjects the surgery it has so long despised. Until within the last few months the Apothecaries' Society of London also granted its license without demanding from its candidates any knowledge of surgery, and this subject was only lately introduced in obedience to a "recommendation" of the General Medical Council. In future, anomalies of this kind will no longer exist, and each one of the sixty-and-odd British and Irish medical qualifications will indicate that their possessors have at least been examined in surgery as well as medicine and midwifery.

The second good point of the act is that it provides for the registration of foreign degrees in medicine when obtained by only qualified British subjects from a source of the *bona fides* of which the Medical Council is convinced. This is a much-needed improvement, for not a few Englishmen are proud of the degrees granted to them by first-class American and European Universities, and they have long felt it to be an unbearable grievance that they should be debarred from appending such honorable distinctions to the entry of their names in the official *Register*.

The first election of direct representatives will take place in November next, and already the air is laden with rumors of who will and who will not be candidates on the occasion.

For Ireland there can be but little doubt that Dr. A. H. Jacob, F.R.C.S.I., Secretary to the Royal College of Surgeons of Ireland, and Surgeon-Oculist to His Excellency the Lord-Lieutenant, will be the chosen candidate. During a long number of years this gentleman has identified himself with the question of medical reform, and at the last election of a representative of the college of which he is a Fellow, on the General Medical Council, he was only one vote below the successful candidate, who was seeking re-election at the expiration of his term of office. Dr. Jacob is deservedly popular with the profession in Ireland, and is especially known as one of the proprietors and Irish editor of the *Medical Press and Circular*, which mainly circulates in the sister isle.

The Royal College of Surgeons of England was recently the scene of the annual election of Fellows to fill the vacant seats in the Council of the College. The body in question consists of twenty-four members, each holding office for five years, and eligible for successive re-elections. Three members retire by rotation every year, and do not always aspire to be again returned to the Council, while other vacancies may of course arise through death or resignation from various causes. This year a fourth vacancy was created by the death of Mr. Cooper Forster, ex-president, who died early in the year. One of the retiring members also abstained from making a further appeal to the suffrages of his constituency, while the other two—Mr. Lund, of Manchester, and Mr. Berkeley Hill, of University College Hospital—asked to be once more returned to the Council. The total number of candidates for the four seats was eight,—viz., Messrs. Lund, Berkeley Hill, Reginald Harrison, Sibley, Willett, John Couper, Rouse, and Brudenell Carter, of whom the first four were duly elected in the order named.

Following this performance came the annual rearrangement of the officials of the College, and, much to the surprise of every one, Mr. Savory has been re-elected president, there being but a single occasion in the previous history of the College on which the same surgeon held the chief office two years in succession. Another departure, of even a more striking character, also has been inaugurated this year. Hitherto it has been the invariable rule for the senior of the two vice-presidents to pass on to the presidential chair, while his place has been filled by the then junior vice-president, who in his turn became the next succeeding president, a fresh junior vice being elected each year. Now, this order has been entirely changed by the election of two new vice-presidents in the persons of Sir Joseph Lister and Mr. Jonathan Hutchinson; the existing officers, Messrs. John Wood and Henry Power, being thus, as it were, cut off from their right of succession to the principal office in the College. The reasons for such radical changes are not of course made public, but it is not difficult to imagine they have some relation to the probable opening of the new Examination Hall by the Queen in the autumn.

The meeting of the British Medical Association, which commences at Brighton on August 10 next, promises to be a more than ordinarily successful gathering. The ease and rapidity with which the favorite sea-side watering-place can be reached from London will entice a goodly number of metropolitan practitioners to the annual reunion; and as an additional inducement to put in an attendance, the presence of Dr. Billings in the character of principal orator in the section of Medicine will be found irresistible by many who might otherwise not care to undergo the journey. The mention of Dr. Billings's name in this connection naturally recalls the mournful circumstance which led to his acceptance of the position he is about to fill; but it may safely be assumed that no one who listens to or reads the address that he will deliver will for a moment fail to remember the great loss sustained not only by American medicine, but by the profession throughout the world, when death deprived it of Austin Flint's living light and presence. In Dr. Billings, however, we shall have a worthy representative of all that is best and brightest in the country across the waters, and in the welcome that he will receive among us will be read an evidence of the harmonious relations that bind the profession in the two countries closely together.

Another most welcome guest, who has already felt something of the warmth of fellowship in the old country, will also lend *éclat* to the Brighton meeting,—Dr. Oliver Wendell Holmes. With what eagerness all classes of English society, in all places, have sought to do honor to the world-famous "Autocrat of the Breakfast-Table" is already known to those, his countrymen, who are privileged to call him their own. And it is needless to recount in this place how the great centres of learning—Oxford, Cambridge, Dublin, Edinburgh—have hastened to distinguish themselves by enrolling him among the noblest of their graduates. Indeed, it must be not a little embarrassing to the learned professor to reflect on the number and the variety of the multiplicity of doctorates with which he has been decorated during his residence in our midst. But better than all such nominal distinctions, and more grateful to himself assuredly, will be the recollection of the warm-hearted friendliness and true brotherly goodwill which he will bear back with him from the people of Great Britain, and which the nation he is returning to will readily interpret as an earnest of the common sentiment of this country towards that he represents.

An unusual effort was made this year to stimulate public interest in the Hospital Sun-

day Fund, and in the week preceding the collection a large number of open meetings were held, at which speeches in behalf of the object in view were made by eminent and popular speakers. The result, however, is anything but encouraging, as, in spite of all that has been done, the collection for 1886 is but a paltry five thousand pounds more than that obtained in 1885. And meanwhile the condition of several of the principal hospitals in London is wellnigh desperate. That of King's College especially is pitiable. Already a heavy debt is pressing on it, and its investments are rapidly disappearing under the drain to which its capital has had to respond in order to meet current expenses in excess of income. Special meetings have been held with a view to resuscitating it, but so far with little apparent effect. And University College Hospital is in straits only less serious. Even the great endowed institutions like Guy's and St. Thomas's are feeling the pressure of hard times, the agricultural depression having affected the former especially, a great part of its income being derived from land. St. Bartholomew's alone, perhaps, of all the metropolitan charities, can be looked upon as being "in funds;" but then it is by far the most richly endowed, and draws a large proportion of its income from ground-rents and similar certain sources of wealth. A full consideration of the existing state of affairs leads irresistibly to the conclusion that the whole system of hospital support and administration will have to be steadily and resolutely faced before very long, for events have quite sufficiently proved that the customs of the past are inadequate to the needs of the present and cannot possibly provide for the wants of the future.

The question of the direct representation of the profession on the General Medical Council is commencing to become a prominent subject for discussion. Within the last day or two a circular has been issued on behalf of Dr. J. Grey Glover, who seeks to obtain the suffrages of electors for the English division, to which, as previously stated, three members are allotted by the act. This gentleman's connection for a long number of years with the *Lancet* has afforded him exceptional opportunities of learning the difficulties and aspirations of general practitioners, and he has always shown a deep interest in their affairs. At a preliminary meeting in support of his candidature, held on the 29th instant, there were present Sir Andrew Clark, Dr. Wakley, of the *Lancet*, Mr. Malcolm Morris, Mr. Pearce Gould, and several other prominent members of the profession, all of whom are included in Dr. Glover's election committee. The name of Dr. Waters, an ex-President of the British Medical Association, has been mentioned as likely to be one of those whose candidature will receive the support of the Association. As this body numbers more than ten thousand strong, it is clear that whoever is backed by it must derive an immense advantage, the registered practitioners of England and Wales reaching a total of fourteen thousand. For Scotland and Ireland the numbers respectively are seven thousand and nine thousand.

There is little to record in the direction of scientific work, this being the "slack" season of the year, and most men being engaged in preparations for the labors of the winter, which will be inaugurated in October with the reopening of the societies. The season of conferences, however, is rapidly approaching, the Association meeting being, as a rule, the forerunner of them. It is announced today that Sir Spencer Wells will preside over the Sanitary Congress to be held at York in September.

The Bradshawe Lecture at the Royal College of Physicians will be delivered this year by Dr. Dreschfield, of Manchester, on August 18. The subject is "Diabetic Coma."

CHICAGO.

MIDSUMMER finds our professional ranks depleted: some have gone to the north lakes, others to the sea-shore, and again others beyond sea. Those remaining at home find no difficulty in caring for the sick, the health of the city having been unusually good. The temperature during the summer has been more even than that experienced for many years, and its low range has also been remarkable. Indeed, there are few places more favored in this particular than Chicago. With such conditions, our rate of mortality is below that of preceding years.

Local societies still hold meetings, but the attendance is not large. The last meeting of the Chicago Medical Society was mainly devoted to resolutions of respect in memory of Dr. R. C. Hamill, an old and highly-respected member of the profession. Dr. Hamill came to this city in 1851, and from that time has been identified with every movement where public health has been concerned. He was the leading spirit in the organization of the Sanitary Commission here, the Illinois Soldiers' Home, the Home for Incurables, and the Presbyterian Hospital. He had attained the advanced age of seventy-eight years, and was active up to the day of his death. His example had a wholesome influence upon all who either knew him or knew of him.

The Polyclinic has at last become an established fact. It was organized July 26. The present location, where its work is to be done, is obscure and considered out of the way, in the north division of the city. Going carefully over the list of professorships, we can hardly consider it strong in the sense that we would consider the Polyclinic of Philadelphia or New York. We question if it is strong enough to command a large patronage. In-

deed, it cannot be reasonably expected that practitioners seeking the best information upon special subjects would come to Chicago unless superior inducements were offered. The mere railway-fare from this point to New York could hardly become a consideration, in view of the much greater advantages at the latter place. It is not just yet clear as to where our Polyclinic is to get its clinical material. For the present, at least, the organization is without hospital facilities.

At the last annual meeting of one of our local medical societies, those present were treated to the sight of an ex-president peddling election-tickets, *à la* ward-politician. This would be styled by some as progressive, but it appears to me a misapplication of the term. The official positions in our societies should seek the men, and not the men the official positions.

We have another new medical school, the Chicago Ophthalmic College. The faculty is composed of our younger men. The object of the College is to give instruction to post-graduates, and, as the lecturers are, with one exception, teachers in the Polyclinic, this new institution may be considered as in some way a part of the latter.

Dr. Spitzka's article on Insane Hospital Supervision is likely to be productive of good results in this State. Of course there will be not a little protest; but Dr. Spitzka has taken time to fortify himself with reliable information, though it may not have been obtained through the State Board of Charities of Illinois.

The process of evolution in newspapers has resulted in the development of a large number of "police gazettes" in this city. The daily reader is now treated to a mixture of crime "illustrated" (*sic*), and "medicine" plain, without cuts. About the first of this month, one of our illustrated dailies came out with a sure cure for diphtheria. The "cure" was spirits of turpentine, and the dose prescribed by the editor was a tablespoonful for adults and a teaspoonful for children, frequently repeated. This criminal advice resulted in more than one narrow escape from death. We believe newspapers are irresponsible in such cases; and why not, when they can under the title of a daily newspaper fill their pages with what would be suppressed if published under the heading "Police Gazette"?

August 13, 1886.

PROFESSOR BREISKY, who has just been advanced to the position left vacant by the retirement of Professor Spaeth, of Vienna, from the chair of Obstetrics, is a man of broad views and strong convictions. The appointment is looked upon as a good one here, since Professor Breisky is well known and has always been popular with American students.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

THE Tenth Annual Session of the Association was held at Indian Harbor Hotel, Greenwich, Connecticut, August 25, 26, and 27.

FIRST DAY, WEDNESDAY, AUGUST 25.

Morning Session.—The meeting was called to order by the President, Dr. EDWARD WIGGLESWORTH, of Boston, who delivered the following

OPENING ADDRESS.

Gentlemen,—Just ten years ago, at Philadelphia, I had the honor of calling to order the first public meeting for the organization of this Association. Our specialty for the first time received national acknowledgment. Our guerilla warfare was over, and our subsequent record has been one of unbroken successive victories over bigotry, error, and ignorance.

But the day of paladins is past, and our ranks will admit more recruits. There are still remaining opportunities for more extended instruction of students in medical schools, while the lack of hospital facilities for the proper clinical treatment of diseases of the skin is a standing shame and disgrace to our municipal authorities, to our hospital boards, and to the medical profession itself. "As now arranged nearly everywhere among us, these institutions refuse to a large class of sick persons the benefit of hospital residence either wholly, or offer them, if received, not, we may fairly say, the best medical skill it is in their power to procure." Some progress has, however, been made. New York has now a special hospital for skin-diseases, besides two wards in the Charity Hospital, and Philadelphia has special clinics with beds at three different institutions.

That the workers are ready as soon as they shall have opportunity, is evident. Ten years ago our officially recognized representatives were four professors, five clinical professors, one instructor, and six lecturers: total, sixteen. To-day we number seventeen professors, eleven clinical professors, six instructors, and sixteen lecturers: total, fifty. Nor do I include genito-urinary surgery, which I regard as a distinct specialty from that of dermatology, which of course includes syphilis.

About twice as many cases of diseases of the skin are now annually treated by specialists as there were ten years ago.

The contributions to American dermatological literature during the past decade include the best treatises, hand-books, and atlases, the only periodicals, and some of the best monographs of the time, in the English language.

Our sole local organization, the New York Dermatological Society, is as active as ever, and the good work which it has already done is constantly increasing.

Two honorary and three active members of our original Association have passed away since its organization. Twelve active members, all living, have been added to its ranks. So much for our material progress and present prosperity.

Other objects of the foundation of our Association have been by no means neglected during the past ten years. There exist today a harmony and good feeling among us which, but for the personal acquaintanceship resulting from the formation of this Association, never would have existed. We have come into better accord as to the "Nature and Treatment of Skin-Diseases." Our increased membership proves that our Association is "held as a place of aspiration;" and it has consistently required "independent work in our department" as the essential preliminary step towards the acquisition of such membership. The systematic work of our standing committee upon Statistics has already furnished valuable data for comparison, as well as a series of excellent reports upon "Leprosy in America." Concerted official effort has done much and will do more to repress the rank luxuriance of growth of dermatological nomenclature and to furnish a "uniform and simple system."

While much has been accomplished, much still remains to be done. The idea of specialism, already rooted, is to be nurtured and trained in the minds of the profession and of the public, and the practical development socially of our specialty itself is to be elaborated in many minor details. The pioneer must no longer prove a martyr. A knowledge of the weaker side of human nature, useful for selfish financial ends, must no longer be allowed to usurp the province of exact scientific acquaintance with disease, inuring to the benefit of our race. The "elaborate division of labor" is "as useful and successful in a learned profession as it is in the mechanic arts," for it is merely a relative question of height of standard. Specialism substitutes quality for quantity, which substitution is the essential characteristic of the civilized man as distinguished from the savage, while the rapidity of such substitution gauges the progress of civilization itself. Medicine is merely that complex whole which results from the combination of all its component parts, and their individual advancement is the criterion of its own progress.

Science is only exact knowledge. Medicine is that knowledge specially directed to the physical welfare of mankind, and specialism is only that further subdivision rendered necessary by the very various parts composing the individual, and possibly by the extension of our opportunities for studying these parts, due to increase of mechanical means for enlargement of the fields of our hitherto unaided senses. No one can to-day "take all knowledge to be his province." Science does not culminate in a Jack-of-all-trades, least of all in one whose conscience has become anæsthetized by custom, who confounds his own limitations with the "limitations of human understanding," and his own ignorance with "the immaturity of medical therapeutics." The specialist builds his own boundary-wall, and cannot, if he would, poach upon the preserves of others. He "distinguishes what he can do from what he cannot," thus filling the old definition of the best physician. He cannot maltreat a patient, and, when compelled to confess ignorance and seek superior wisdom, charge the wronged sufferer another and still higher fee for a "consultation," which is in reality a confession. It has been sarcastically called "the sole duty nowadays of the family doctor to decide what specialist shall be summoned." It certainly is his duty, and a very important one as a man of honor, to decide whether any one, and, if so, who, can probably accomplish that wherein he admits that he himself has failed. Unfortunately, many know so little that they are even ignorant of how much is known by others; but in many respects the specialist has already raised the average standard of requirement for general practice to such an extent that much of the old routine practice of physicians who treated their patients for the very diseases for which they referred members of their own families to the specialist has now become punishable malpraxis. But the general practitioner has his revenge in opposing as unnecessary the hospital appointment and even the private practice of the very specialist to whom he himself flees as "a very present help in time of trouble."

We are told that "the human body is made up of parts and functions so thoroughly interdependent that it cannot be parcelled out into defined and isolated regions." It can and it cannot. What scientist divides a country into square miles and attempts to become thoroughly conversant with every atom existing in each of those miles? The special divisions of study are rather the flora, the fauna, the geological strata, etc., though all these may pervade identically every mile of the region. If regional surgery is possible, then specialties are certainly not contra-indicated. We hear of "appalling pathological conglomerates" due to lack of proper "general medical treatment." Not only "conglomerates" but often single lesions are very variously diagnosticated by different general physicians, and the "conglomerates" are usually merely the aggregated effects of original causes which might have been obviated by proper investigation in due season on the part of suitable specialists.

The aforetime "consulting physician" meant one who, in addition to his general acquirements, knew more about some particular thing than any one else. We may be sure that his general acquirements had to pay the penalty. To-day we honestly admit this, and, renouncing the practice obtainable by general acquirements, keep to that particular thing of which we know more than others. No one has mental ability enough at the present time to add to the greatly-extended knowledge necessary to the general physician the intensified fundamental acquaintance with detail needed by the specialist. Life is too short for the ablest intelligence to exhaust even any one specialty. The physician may, like Newton, "think the thoughts of God after him," but the thoughts of the Infinite upon the smallest molecule of matter call for more than the limits of a finite existence. The true consulting physician of to-day is the specialist, and he should therefore receive this title at the hospitals with which he is connected, while those ex-physicians, called consulting, but never consulted, should receive their true and proper title of Emeritus.

But enough of the "idea of specialism." The public will in time appreciate the absurdity of being content with inferior results in one branch of medicine, because, forsooth, there are so many others in which their medical adviser is equally or more at home. They will reason rather that he who "insists upon doing the work of ten men manifests a quality of mind which we can only call arrogance, and which challenges for his work severe criticism." Versatility will not atone for crude and imperfect work, any more than will lack of time, hurry of life, keenness of competition, or financial necessity; and it is merely brazen self-assertion which delights "not so much in doing the thing well as in showing how well he can do it."

Believing in the ultimate achievement of all possibilities and in the progress of truth, I have no doubt as to the future of specialism if we are honest and earnest. Not infinite omniscience, but infinite morality is the duty of the specialist, and this, conscientiously carried out, will blunt the sharpest dart of the hostile general practitioner. While visions of what yet remains to be accomplished might well lead us almost to despair, a mere glance at the generally prevailing ignorance on the part of both physicians and their patients shows conclusively that we and our work are imperatively demanded.

Dr. Wigglesworth next considered in detail the duties in the future of members of the Association as to the establishment of special skin wards in all general hospitals; as to a revision of the existing nomenclature and classification of skin-diseases; as to improvements in the Annual Reports of Transactions; the use of the metric or international decimal system; more extended statistics; the establishment of a permanent committee upon new remedies; the question of fees and the remuneration of physicians by others of the same profession; the desirability of a (proposed) "consistent schematic plan for the report of cases," always accompanied by a summary; and the duties of specialists as to instruction. He mentioned the establishment in New York of a society for the prevention of contagious diseases. Attention was called to the proposed union of all the special medical associations of America into a general "Congress of Physicians."

Edward Bennet Bronson, M.D., of New York, presented a paper on

ERYANTHEMA SYPHILITICUM.

The purpose of the writer was to call attention to certain cutaneous eruptions of an erythematoid character occurring in connection with syphilis, and, so far as possible, to determine their etiology. In the first place, a case was reported of a syphilitic patient who developed a peculiar eruption upon the head, hands, and feet. Although the eruption presented no pronounced syphilitic characteristics, it was regarded as due to syphilis for the reason that it was shortly followed by an outbreak of well-marked specific efflorescences on various parts of the body, and, moreover, there was a transformation of the eruption upon the head into infiltrated lesions presenting a distinct syphilitic character. The eruption first appeared on the face in the form of an erythema which was covered with vesiculo-papular efflorescences. Later a similar outbreak occurred on the nape of the neck. The vesiculo-papules broke, leaving excoriated surfaces of a diphtheritic character from which there exuded an exceedingly abundant, foul-smelling discharge. Soon after, vegetating growths made their appearance, which upon the bearded parts of the face were quite exuberant and resembled condylomata acuminata. Those upon the neck formed more discrete, tuberous prominences, and had the appearance of condylomata lata; while upon the upper parts of the face the elevations were nummular, and had comparatively smooth though somewhat lobulated surfaces. After a week or two, the erythematous areas which formed the bases of the vegetating lesions became the seats of a gradually-increasing, copper-colored infiltration. The palms and corresponding surfaces of the fingers were covered with a deep red, sharply circumscribed erythema, which was followed by lamellar desquamation. A similar eruption occurred in patches upon the soles. The finger-nails were all more or less affected with onychia sicca. Upon the body and limbs several crops of well-marked syphilitic papules succeeded one another, and finally all the manifestations yielded rapidly to mercurial treatment. The preliminary

eruption in this case was characterized as an eryanthema dependent in some way upon the specific disease. Other instances of erythematoid eruptions, occurring incidentally to syphilis, were referred to as being more or less analogous to the above-cited case.

Allusion was made to the syphilitic roseola as a possible case in point; then to the preliminary erythematous eruptions observed in hereditary syphilis,—the *érythème précurseur* of the French,—and also to certain forms of coincident or preliminary erythema as described by Hebra, Neumann, Danielesen, Lipp, and Finger. Attention was next called to the syphilitic erythema nodosum of Mauriac, and three cases of this affection were reported, in one of which the erythematous eruption was apparently succeeded by a syphilitic infiltration that pursued a course similar to that of a breaking down gumma of the skin.

Finally, it was attempted to define more precisely the etiological relations of these various erythematoid eruptions occurring in connection with and probably as a consequence of syphilis. It was maintained that probably they were not equivalent in their mode of origin to the syphilodermata, but rather to certain angionomatic or neurotic affections, which they closely resembled. The true syphilodermata are always characterized by a specific infiltration, and are probably the result of a determination of the materies morbi to the surface. They are, therefore, pathognomonic of syphilis. The eryanthema syphiliticum, on the other hand, is only an indirect effect of the syphilis, the result of reflex irritation of the skin from the action of the disease upon nervous centres, and therefore not pathognomonic of syphilis. The fact that this might be followed by a true syphilitic infiltration *in situ* was regarded as analogous to the effect sometimes observed of traumatic irritation in syphilitic subjects, where local injuries became the seat of specific infiltrations.

DISCUSSION.

Dr. I. E. Atkinson, of Baltimore: I wish to say a few words in regard to pathognomonic syphilitic eruptions. In this connection a great deal of caution must be exercised, and I think we should not dogmatize with regard to the specific lesions of syphilis. Lesions similar to those described by Dr. Bronson are not of excessive rarity in cachectic subjects and in cases of malignant syphilis, but in my experience, when specific, they have always been manifestations of late tertiary syphilis.

Dr. J. C. White, of Boston: The occurrence of the forms of disease which have been described are so rare in syphilis, we know so little of the nature of erythema nodosum and its causes, and we know so little of the nature and causes of so-called erythema herpetiformis (which I think should be called erythema multiformis), that it seems to me we must have some more exact data before we can regard these affections as a necessary sequel of syphilis, and as anything more than accidental occurrences. While there is nothing *a priori* against a causal relation existing between these conditions and syphilis, such relation has not been proved. The early roseolous exanthematous condition of the skin in syphilis is of sufficiently frequent occurrence to be looked upon as a distinct feature of syphilis. This is wholly unlike the rare forms of dermatitis which have been described to-day.

Dr. F. B. Greenough, of Boston: Syphilitic roseola seems to me to be decidedly distinct from other forms of congestion of the skin, especially in one point,—that is, during the subsidence of the congestion little points of distinct congestion continue for a long time. These appear to represent the follicles. The points of pigmentation are also an almost constant occurrence. This I have not seen in other forms of affection of the skin.

Dr. G. H. Tilden, of Boston: It seems to me in the present state of our knowledge that it would be more philosophical to consider the appearances described as accidental than as dependent upon the specific disease.

Dr. I. E. Atkinson, of Baltimore, then read a paper on

RUBELLA, OR RÖTHELN.

The paper was based upon a review of the literature of the subject and a study of the reported cases. The disease was regarded as distinct from measles and scarlet fever. The period of incubation varies between two and three weeks. In many cases there is no prodromal stage; there may, however, be prodromata for twelve or twenty-four hours; catarrhal symptoms are generally absent, but they may be present; sometimes there is congestion of the throat; swelling of the lymphatic glands is a peculiar and marked symptom; this swelling is painful, but does not pass on to suppuration. In many cases fever is absent; the eruption first appears on the forehead and face, and in the course of a few hours spreads to other parts of the body; the eruption is more or less irregular, being more intense in some situations than in others; from the beginning to the disappearance of the eruption is usually three or four days. In the greater number of cases desquamation fails to occur; complications and sequelæ are not unknown, the most common being bronchitis, pneumonia, and gastro-intestinal disorders; renal affections may follow this disease; relapses occasionally occur, but not later than the end of the second week. The prognosis is almost always favorable.

The only difficulty in diagnosis is in connection with measles, and in isolated cases a thorough consideration of all the points is essential to a correct conclusion. Very little

treatment is required, except in the presence of complications.

On account of the confusion existing as to the nomenclature of this disease, the speaker suggested that rubella be accepted as its proper title, and that it might be known in popular language as epidemic roseola.

DISCUSSION.

The PRESIDENT: Several years ago I suggested that measles be called morbilli, and rubeola or rötheln be used to signify what is termed German measles, and roseola be reserved as the title for the rose-colored spots seen in syphilis and other conditions. There does not seem to be any necessity for the introduction of a new term.

REPORT OF A CASE OF LYMPHADENOMA (MYCOSIS FONGOÏDE) AND AUTOPSY.

In the absence of the author, Dr. G. H. FOX, of New York, the following paper was read by the Secretary.

The paper described the case of Mrs. G., aged 33 years, the mother of six children. During pregnancy in the summer of 1881 she suffered with general pruritus, which passed away after confinement in October. A year later, small flattened circular tumors appeared in the axillæ and on the breast. These became moist and were accompanied with a burning sensation. The eruption disappeared from these situations and reappeared upon the back and other portions of the body. After the birth of her last child, in February, 1885, a tumor developed at the inferior angle of the left scapula; the lesions on the other parts of the body disappeared, with the exception of two spots on the finger and one on the left cheek; the tumor on the left scapula gradually softened and disappeared.

The patient was admitted to the hospital in October, 1885, and was fairly well nourished. There were at this time numerous tumors over the body, some of which were superficially ulcerated; the worst tumors were on the breast. Hypodermic injections of Fowler's solution were used without benefit; chaulmoogra oil was given in increasing doses until forty drops four times daily were taken, without causing any improvement.

The patient died in April, 1886. The microscopical examination gave the usual appearances of these growths; the internal organs were found to be normal.

DISCUSSION.

Dr. G. H. TILDEN, of Boston: One year ago I reported a case of this disease. I said then that it was not sarcomatous. Rindfleisch states that he has found a distinct micrococcus inside of the blood-vessels in this connection, and recently this has been confirmed by another observer. It looks as though what we ordinarily know as malignant lymphoma, affecting the lymphatic glands, with deposits in other parts of the body (Hodgkin's disease), is one of the infectious diseases. I should not be surprised to find that this mycosis fongoïde is a variety of the same disease, and that it is nothing but an acute infectious disease.

The next paper, entitled

A NOTE RELATIVE TO THE BULLOUS ERUPTION OCCURRING AFTER THE INGESTION OF IODINE COMPOUNDS,

by Dr. J. N. HYDE, of Chicago, was, in the absence of the author, read by the Secretary.

The first case described was that of an infant seven months of age. Six weeks before coming under observation the child had suffered from a febrile attack, the exact nature of which was not known. Three weeks later the eruption made its appearance. The lesions at first presented the appearance of chicken-pox. The child's face, the dorsal aspect of the hands and forearms, and the scalp were covered with isolated, whitish, split-pea to marble-sized, flattened, slightly umbilicated lesions resembling molluscous tumors. The contents of the lesions were inspissated, thick, and grumous, and of such consistency that they did not escape on rupture of the sac. It was learned that iodide of potassium in one-grain doses had been administered for the febrile attack. On the discontinuance of the iodide and the use of antiseptic powder, the lesions rapidly disappeared.

Case II.—A lad 15 years of age, who had recently undergone an operation for necrosis of the right femur, developed an eruption involving the entire body. There were two distinct sets of lesions. That which predominated was composed of annular circinate plaques, varying in diameter from several centimetres to half a metre. There were also here and there, particularly about the finger-ends, distinct blebs. The patient had been taking iodide of potassium in fifteen-grain doses. This was discontinued, and the eruption speedily disappeared.

There are two distinct types—the bullous and the quasi-bullous eruption—produced by the ingestion of iodide of potassium. In the first form the patients are often well advanced in years, often cachectic, and frequently affected with syphilis or other grave disease. In what may be regarded as a second subform of this exanthem, there are di- or polymorphic symptoms. Here bullæ are commingled with papules, tubercles, and other patches of disease. The speaker then described other cases of similar eruptions described by various writers, and in conclusion presented the following interrogative propositions:

1. Are there not three sub-forms of the bullous exanthems developed in certain individuals after the ingestion of iodide of potassium?

2. Is not the first and most common of these to be generally recognized in persons of advanced age and cachectic condition, the rash being then present in the form of typical bullæ?

3. Is there a second and still rarer sub-form, in which the eruption is displayed in di- or polymorphic manifestations, typical, perfect bullæ being then mingled with papules, tubercles, scarlatiniform maculations, or with other and different lesions?

4. Is there not a third and rarer sub-form, the quasi-bullous rash to be most frequently recognized on the face and dorsal aspect of the hands and forearms of infants and children, where the lesions are semi-solid, slightly umbilicated, and filled with inspissated, yellowish matter, and which may shrivel and desiccate on the suspension of the drug inducing the condition?

5. Is this last-described lesion one to be recognized solely as the result of the ingestion of iodide of potassium, never under other circumstances, and one as peculiar to the special condition it represents as is the gumma to syphilis?

DISCUSSION.

Dr. R. W. TAYLOR, of New York: While the most common eruption produced by iodide of potassium is an acneiform exanthem, yet it may cause dermatitis with multiform lesions and with bullæ, which may contain serum, pus, or even blood. I think that many of the cases of extreme dermatitis multiformis which have been described have been due to this cause.

I recently saw a peculiar form of iodine intoxication. It was in a case of gummatous infiltration of the pharynx, where iodoform had been resorted to as a local application. In the course of two hours it produced a diffuse eruption on the face, neck, and hands. On the hands it assumed an eczematous character.

Dr. J. E. GRAHAM, of Toronto: I have had one case similar to that described by Dr. Hyde. A young man 22 years of age had contracted syphilis two years previously. Noticing some pimples on his face, he received a preparation of iodide of potassium containing five grains to the dose. I saw him two days after he had begun to use this preparation. He then had a bullous eruption principally upon the face and neck. At that time I thought that it was a tertiary manifestation, and increased the dose of iodide to fifteen grains. Two days later, the eruption on the face was much increased, and, recognizing the cause of the condition, the remedy was stopped and the eruption rapidly disappeared.

Dr. I. E. ATKINSON, of Baltimore: One year ago I saw a case of what was supposed to be malignant syphilis: the patient had had syphilis and had been put on the use of iodide of potassium. The lesions continued to increase, and after the iodide had been taken for six months I saw the case. There was an enormous formation of scar-tissue over the face and neck. In addition there were bullæ and elevated infiltrated plaques. The appearances presented were unlike those produced by syphilis, and I thought that they were due to the iodide of potassium. The drug was stopped, and in six weeks the ulcerations had healed: the cicatricial tissue of course remained. I think that we cannot lay too much stress upon the dangerous conditions which may follow the administration of the iodides.

Adjourned until eight o'clock in the evening.

Evening Session.—The first paper presented was by Dr. R. W. TAYLOR, of New York, on

PRECOCIOUS GUMMATA.

After a thorough consideration of the subject, and the presentation of a number of illustrative cases, the following conclusions were presented.

1. Like the osseous affections, affections of the nervous system, and malignant syphilides in general, besides many other affections, syphilitic gummata may be precocious in appearance, occurring as early even as the second month of infection, but usually in the third or fourth month, or after that time.

2. Of the precocious gummatous syphilide or gummata, there are three quite clearly marked forms: first, the early, general, and copious form; second, the more localized form, which may invade several regions, is usually symmetrically distributed and sometimes even is confined to one region, particularly one side of the face or scalp and the roof of the mouth; third, a form in which more or less severe neuralgias precede and accompany the eruption, which in many particulars resembles simple erythema nodosum, but which in its etiology is not in any way related to this simple form of eruption, but is a direct outcome of the syphilitic diathesis.

3. That these precocious gummata partake in general of the features of those of later forms, but that they differ in the more acute invasion, in a much more rapid course, and are usually not so profound and destructive in their action as the classical eruption.

4. That of these precocious forms of gummata there are found to be two varieties, one a *non*-ulcerative or resolutive, the other ulcerative.

5. That in the treatment of these precocious gummatous syphilides a combination of mercury and iodide of potassium is much more efficacious than is mercury alone.

Dr. F. B. GREENOUGH, of Boston, then read a paper entitled

CLINICAL NOTES ON SCABIES.

The speaker said that since the establishment of the special department for skin-dis-

eases at the Boston Dispensary, thirteen years ago, he had had the opportunity of studying a large number of cases of scabies, and had been much interested by the rapid increase in the number of cases seen during the past few years. The number of cases had rapidly increased from three in 1879 to one hundred and sixty during the last year. He had during the past year also made inquiries as to the number of members of the same family of whom the patients could give an account as being similarly affected, and had records of one hundred and ten such cases, which, with six cases seen in private practice and the one hundred and sixty above reported, made a total of two hundred and seventy-six cases that had come under his cognizance during the past year. The percentage of cases of scabies had varied from three-tenths per cent. in 1876 to over thirteen per cent. during the past year. This great increase in frequency seemed to be one of the most interesting and important points brought out by his notes. During the war the disease naturally increased, and the medical officers got a knowledge of it which they carried with them into private practice after the war was over. The disease, being properly treated, became so less frequent that the new generation of physicians saw little of it, and each case not recognized proved a focus of contagion for a large circle. Four-fifths of the cases seen were between five and thirty years of age, and only four cases were over sixty years of age.

The facts which were especially noticed were the few cases in which typical burrows could be found; the great constancy of the manifestations on the penis in male subjects; the difference of the symptoms produced by scratching according to the situation of the lesion; and the success of treatment. He had used almost entirely an ointment consisting of two parts of sulphur, one of carbonate of potash, and three of petroleum ointment, simply cautioning the patients against applying it to inflamed and pustular localities. He referred to the distribution of the eruption as of importance in the diagnosis of difficult cases, and called attention to the differential diagnosis between scabies and certain other cutaneous diseases.

DISCUSSION.

Dr. A. R. ROBINSON, of New York: In some cases, where there was difficulty in the diagnosis, I have reached a positive conclusion by opening a vesicle and examining its contents under the microscope, and finding the young acari or the fæces.

Dr. L. N. DENSLOW, of St. Paul: I have had a number of cases in which no burrows could be found, but under treatment suitable for scabies they have recovered. The treatment used has been thorough scrubbing from head to foot, followed by the application of sulphur ointment. In regard to the complaint known as prairie-itch, I should, from my experience, say that it was nothing more than scabies.

Dr. E. B. BRONSON, of New York: I agree with the author of the paper as to the frequent absence of the cuniculi. In many cases I have depended largely upon the elongated character of the efflorescence in making the diagnosis. For three months I treated all cases of scabies with naphthol, using a fifty-per-cent. preparation, rubbing the body thoroughly with this once. This has produced a satisfactory result.

Dr. S. SHERWELL, of Brooklyn: I have recently seen an increased number of cases of scabies, and a large proportion of the cases has been among Scandinavians. I thought that this might be due to want of thoroughness in the cleaning of the ships in which the emigrants are brought to this country. As a prophylactic, I always direct the patient to sprinkle on the sheet of the bed a teaspoonful of the dry sulphur. This acts as a disinfectant, and is unpleasant to the acarus.

Dr. H. W. STELWAGON, of Philadelphia, then read a paper entitled

CLINICAL OBSERVATIONS REGARDING THE VALUE OF RESORCIN, ICHTHYOL, AND LANOLIN IN CUTANEOUS DISEASES.

Resorcin in Eczema.—It is rarely of benefit, but possesses some power over the itching. For this purpose a six-per-cent. ointment is useful. In greater strength it is irritating. In tinea sycosis it has proved of some value in ten- to twenty-per-cent. strength. In tinea tonsurans it is inferior to the remedies usually employed. In one case of leg-ulcer, healing took place under its use. In a second case no effect was produced. In seborrhœa and alopecia dependent upon this disease, a lotion consisting of a drachm of resorcin, one or two drachms of castor-oil, five minims of Peruvian balsam, and four ounces of alcohol, was of value. In tinea versicolor it was found less useful than a solution of hypophosphite of sodium. In psoriasis and in one case of lupus erythematosus the result was negative. In one case of superficial epithelioma a fifty-per-cent. ointment produced a good result, in a second case a fair result, and in a third the result was negative. In a case of favus, a twenty-five-per-cent. ointment used for two months produced no decided effect.

Ichthyol.—In a small proportion of cases of rosacea and acne vulgaris a ten- to twenty-per-cent. preparation was found beneficial. In eczema it was valueless, and usually irritating. In furunculus it acted with good results in three cases when applied as a twenty-per-cent. plaster. In the fourth case it had no effect. It was of service in psoriasis, and also in a case of lupus erythematosus. In favus it was used without effect.

Lanolin.—In some cases as an ointment-

base this is superior to the ordinary fats in use. Where a simple protective action is desired, it is inferior to vaseline, cold cream, or lard. In chronic cases where there is infiltration and where a degree of penetration is the object, lanolin is especially valuable. The writer stated that according to Liebreich a lanolinum purissimum was now manufactured, in which cholesterin ethers were absent. The main disadvantage of lanoline as now manufactured from sheep's wool is its strong sheepy odor. In a few acute and sub-acute cases of eczema, a lanolin, for some reason, proved irritating. As a rule, however, it is bland and unirritating.

Adjourned.

SECOND DAY, THURSDAY, AUGUST 26.

Morning Session.—The first paper, by Dr. G. H. TILDEN, of Boston, was on

TROPHONEUROSIS OF THE SKIN CAUSED BY INJURY OF THE MEDIAN NERVE.

E. F., 55 years of age, was wounded in the wrist by a circular saw, on November 10, four months before coming under observation. The wound was parallel with the limb. The wound was sewed up, and healed in about ten days. Three or four days after the infliction of the injury there was loss of the tactile sense and a feeling of numbness in the last two phalanges of the fore and middle fingers. This has continued and steadily increased. There was at first a slight feeling of numbness in the thumb, but this gradually diminished until it disappeared. Three weeks after the accident a bulla appeared upon the terminal phalanx of the middle finger. Similar lesions have developed from time to time upon the last two phalanges of the fore and middle fingers. The bullæ appear every two or three weeks, and are unaccompanied by any subjective sensation. These leave superficial excoriations which heal in the course of ten days. The skin over the affected phalanges is of a white color and of glossy texture. The growth of the nails is unaffected. There was entire loss of sensation in the skin covering the affected phalanges. The right hand is capable of exerting only one-half the power of the left, the first and second interossei muscles exhibiting the reactions of degeneration.

Six weeks' treatment with the faradic current caused decided improvement in all the symptoms. During this period only one bulla formed. He then stopped treatment and returned to work. Three weeks later all the former symptoms suddenly returned. It was proposed to the patient that an incision be made over the seat of injury, with the view of determining the exact condition, and if possible remedying it. The patient has not since been seen.

Whether the trophic nerves exist as individual and special nerve fibres, or whether the motor and sensory nerve fibres are the ones by which the nutrition of the tissues is governed, is unknown. The latter view was considered by the author as the most rational. Injury or disease of the motor or sensory nerves, as well as disease of the ganglia and central nervous system, may disturb not only motor power and sensation, but also the nutrition of the tissues. That it does so is by no means the case; but why trophic changes should take place in one instance and not in another is not clear. A number of cases have been reported showing that such changes are more apt to follow partial injury of a nerve than complete section. The changes commonly seen in these cases are the so-called glossy skin and vesicular and bullous eruptions, followed by superficial excoriations. The treatment of these cases consists in the use of electricity and the application of blisters over the seat of injury. A last resource is to cut down upon the affected nerve and endeavor to relieve any constriction or pressure upon the nerve which may be found. If no such condition is detected, resection of a portion of the nerve might be advisable, since complete section is not apt to be followed by spontaneous trophic changes, and since it has been found by some observers that resection of a portion of the affected nerve is sometimes followed by the arrest of the trophic changes.

Dr. JAMES C. WHITE, of Boston, then read a paper on

NATIVE PLANTS INJURIOUS TO THE SKIN.

The object of the paper was to show that the number of plants growing native and cultivated in the United States which are capable of exciting some degree of dermatitis by contact is much larger than is generally supposed, and that cases of such inflammation of the skin not infrequently occur without being understood, because the patient has not been exposed to the two or three plants which alone are considered to be poisonous. He enumerated over fifty species which have irritating properties when brought in contact with the skin. With reference to rhus-poisoning, the speaker said that the rhus toxicodendron was comparatively innocuous, while the rhus venenata was the most poisonous species of this plant. The treatment is the ordinary treatment of dermatitis. There is no specific for this form of dermatitis.

The next paper, by Dr. H. O. PIFFARD, of New York, was entitled

NOTES ON DRUGS.

He referred briefly to several recently-introduced preparations.

Dr. F. B. GREENOUGH, of Boston, presented

A FEW ADDITIONAL NOTES ON PSORIASIS.

The paper was supplementary to one presented at the last annual meeting of the As-

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sociation, a continuation of the tabulation of cases of psoriasis seen during the past year. The facts previously noted with reference to age, sex, the time of the first appearance of the disease, and the number of cases, had been confirmed. In addition to these statistics, the author, owing to the fact that a statement he had made at the last meeting in reference to the general health of the patients had been doubted, had attempted to obtain further testimony upon this point. He found that, as a rule, patients with psoriasis were above par in general health and strength. He had records of twenty-nine cases out of twelve hundred and twenty cases of skin-diseases, giving a ratio of cases of psoriasis of two and one-third per cent. The youngest case was nine years of age, while the oldest was fifty-seven years. The reader thought that the interesting deductions to be drawn from his cases were the facts that while nine cases showed symptoms of psoriasis under ten years of age, one was first attacked at the age of fifty-seven years; that out of twelve cases in which evidence could be obtained, four gave a decided history of the existence of disease in some member of the family, and that these cases showed such a high standard of general health. He considered this latter fact as a strong argument against the possible connection between psoriasis and syphilis. The speaker had never seen psoriasis of the hands unassociated with evidences of the disease in other parts of the body.

Dr. A. R. Robinson, of New York, then read a paper on

CHONDROMA OF THE UPPER LIP.

The tumor occupied the right side of the upper lip of a man thirty-six years of age. It had been growing for two years, and was one inch in length by three-fourths of an inch in diameter. It was egg-shaped, the broad end having its seat in the submucous tissue among the mucous glands. The mucous and cutaneous structures were freely movable over the tumor, which was sharply limited, somewhat encapsuled, and nourished by a small artery entering at the base. Microscopical examination showed the tumor to consist of embryonic, gland-, and connective tissue. The gland-tissue was formed of hypertrophied mucous glands and new gland-tissue. The amount of new gland-tissue could not be correctly estimated, because much that resembled gland-tissue represented an early stage in the process of cartilage-tissue formation. The connective tissue was myxomatous, fibrous, and cartilaginous. The myxomatous was present principally at the periphery, and did not represent œdematous fibrous tissue. Fibrous connective tissue was present chiefly between the islands of cartilage. The bundles were small, and the fibrils very fine and often rather indistinct in outline. There were several islands of cartilage, the largest being in the central part of the tumor. All varieties of normal cartilage were present, viz., hyaline, fibrous, and reticular, and also the variety met with in the heads of cephalopods,—namely, cartilage with ramifying or branched cells (*chondromes à cellules ramifiées*).

The cells showed great diversity of forms and sizes. The bodies of the branched cells presented a great variety of form. Some were surrounded with a capsule; but in the majority of cases this was absent or only faintly indicated. In some places the islands of cartilage had joined each other, but usually they were separated by the other constituent tissues.

The affection was considered to be very rare. It has been described by Paget under the name of "labial glandular tumors."

Dr. P. A. Morrow, of New York, read a paper on

KERATOSIS FOLLICULARIS, ASSOCIATED WITH FISSURING OF THE TONGUE AND LEUKOPLAKIA BUCCALIS.

The patient, C. O., a sailor, aged 21 years, came under observation in December, 1885. Five years previously, soon after beginning his seafaring life, he noticed a number of blackish points upon the back of the hands, some of which he squeezed out. Soon afterwards these appeared upon other parts of the body. They improved when he was on land, but were aggravated when he was at sea. The entire surface of the body, with the exception of the face, palms, and soles, was found to be the seat of the follicular disorder. The ducts of the sebaceous glands were occupied by comedo-like bodies, projecting sometimes one-fourth to one-half an inch above the surface. From many of the follicles small white hairs protruded. The comedos, when pressed out, were hard and dry. The hard portion of the comedo was continuous with an adhesive substance dipping deeply into the follicle. There was no evidence of irritative or suppurative action. They were not accompanied with itching.

The tongue was large, and rough to the touch; the surface was deeply fissured, the fissures extending to the submucous tissue. The buccal mucous membrane presented a bluish-white appearance, thickened and raised in places, forming distinct plaques, which were superficially fissured. The patient stated that the tongue had been white and a little sore ever since he could remember. The absence of irritation or marked sensitiveness of the fissured organ was quite noticeable. Examination seemed to exclude the possibility of a syphilitic origin. The speaker referred to other cases which had been reported. He objected to the term ichthyosis, since that suggests a disease of a different nature. He selected the name keratosis follicularis as

more correctly expressing the pathological condition present, as well as indicating the anatomical seat of the disorder. Drawings representing the microscopical appearances of the lesions were presented.

While in the hospital the patient improved decidedly under the use of local applications of linseed oil; but within a short time of the discontinuance of the treatment the condition became as marked as before treatment was employed.

Adjourned until evening.

Dr. J. E. GRAHAM, of Toronto, Canada, read a paper on

A CLINICAL STUDY OF SCLERODERMA.

He first related the histories of two cases of this rare disease, one of which occurred in the practice of Dr. Smith, of Seaport, Ontario, and the other was referred to him by Dr. Jenner, of Picton. The first patient, Mrs. R., 47 years of age, had previously suffered from rheumatism. The hardening of the skin began in March, 1882, and was first noticed over the back of the neck. It gradually spread so that in about ten weeks the integument over the greater part of the body was affected. The movements of the limbs, as well as those of respiration, were impeded. The internal treatment adopted was liquor ferri iodidi and liquor arsenitis. A faradized bath over the surface of the skin was used. In six weeks the skin began to grow softer, and in ten months the patient was quite well. There has been no return of the difficulty.

The second patient, Mr. H., age 37, came under observation in May, 1886. There was a history of hereditary rheumatism. The disease had commenced some months previously. The first symptoms were stiffness of the limbs, with œdema of the lower extremities. Then hardening of the skin over the hips was noticed, which gradually spread and was accompanied with pigmentation. The treatment consisted in the administration of potassium iodide at first, and latterly of salicylate of sodium. There has been some improvement under this treatment.

In his remarks in connection with the disease the speaker referred to the following points: 1, that the disease is found principally in temperate climates, and occurs in seasons when there are sudden changes in the weather; 2, that it is more closely related to rheumatism than has been supposed; 3, that although morphœa has in all probability a similar pathological origin to scleroderma, yet the clinical distinctions are so marked that, at present, it is expedient to treat it under a different name.

DISCUSSION.

Dr. L. N. DENSLOW, of St. Paul: In one case of scleroderma in which there were two large plaques on each pectoral region, benefit has followed the daily use of the constant current.

Dr. LE GRAND N. DENSLOW, of St. Paul, read a paper on

CARCINOMA CUTIS.

The patient, aged 49 years, had been an invalid for several years. He had had a severe right pleurisy, and presented the physical signs of absence of the right lung. The skin of the right chest from the second to the seventh rib, and from the posterior border of the axilla to the median line, was covered with a nodular new growth, which presented no ulceration. Around the nipple the nodular mass for an area of six square inches reached a thickness of one inch. The older portions of the growth were covered with thickened epidermis with thick brown scales. There was slight enlargement of the axillary glands. The different nodules were not movable beneath the skin, but the whole mass was free from the fascia. The mass was not painful on pressure, but was the seat of occasional neuralgic pains. The duration of the growth was seven months. The patient died four months after coming under observation.

The autopsy showed obliteration of the right lung. The left lung presented many small solid nodules. In the mesentery there was a nodule one and one-half inches long by one-half inch in diameter. The microscopic examination of these masses showed that in them all connective tissue preponderated. The growth on the skin occupied the papillæ and the deeper portions of the corium.

DISCUSSION.

Dr. I. E. ATKINSON, of Baltimore: This case suggests what has been termed lenticular cancer, in which the growth sometimes becomes perfectly continuous. These cases are exceedingly malignant. In a case of my own which presented appearances similar to that of Dr. Denslow's patient, the disease ran its course in two or three months. These cases are so malignant that it would seem that no operative procedure is justifiable.

Dr. R. W. TAYLOR, of New York: I might allude to two cases which were for a time looked upon as cases of cancer of the nipple, both in men. They eventually turned out to be cases of hard chancre; but in one case the induration was so great that carcinoma was strongly suspected.

Dr. I. E. ATKINSON, of Baltimore, read a paper on

SCARLET FEVER AND SCARLATINIFORM ERUPTIONS FOLLOWING INJURIES AND OPERATIONS.

The speaker first referred to the literature of the subject, referring to the cases on rec-

ord. In many of these cases it was held that the affection had been a true scarlatina. In other cases the scarlatiniform rash was of a septic origin. Various drugs which are frequently prescribed in traumatic cases will produce such eruptions, special reference being made to the cinchona alkaloids. The eruptions produced by these drugs are usually of an urticarial appearance, but they may be of scarlatiniform nature. The following conclusions were presented :

1. Unprotected persons who have suffered injury or undergone operation are much more liable to scarlet fever than healthy individuals. This probably holds good with reference to other infectious diseases.

2. When an epidemic tendency to these symptoms prevails after injuries and operations, it may be concluded that true scarlet fever is present.

3. Septicæmia is occasionally accompanied with a scarlatiniform eruption.

4. Medicinal eruptions, especially from cinchona alkaloids, may follow accidents and injuries.

DISCUSSION.

Dr. P. A. MORROW, of New York: The speaker has not mentioned the rash which often follows the use of antipyrine, which frequently simulates scarlatina, although it is usually of a more measly character. Again, carbolic acid and iodoform dressings will often produce rashes presenting the objective appearances of scarlet fever. There is another eruption known as the "doctor's rash," which appears upon the persons of sensitive individuals when stripped for examination. I have seen this in several cases, in one of which it was very marked.

Dr. L. N. DENSLOW, of St. Paul: I recall the case of a young woman who stated that a scarlatinous eruption always appeared upon her body on exposure to sunlight. In order to test the matter, she was directed to come to the hospital closely veiled and gloved. She was then placed in a dark room and one glove removed. A ray of sunlight was then allowed to fall upon the hand, and at once a strip of erythema appeared. The same occurred on the face when it was exposed.

Dr. I. E. ATKINSON, of Baltimore: While I have seen the rashes mentioned by Dr. Morrow, I did not consider them in my paper, because I was specially interested in those scarlatiniform eruptions following traumatism, and I referred to medicinal eruptions only incidentally.

Adjourned.

(To be continued.)

BAD EFFECTS OF DRESSINGS OF MERCURIC CHLORIDE.—At the Pennsylvania Hospital, two resident-surgeons have been absent on sick-leave, on account of the effects of absorption of the drug in their daily handling of corrosive-sublimate dressings.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

THURSDAY, JUNE 3, 1886.

The President, Dr. B. F. BAER, in the chair.

DR. R. P. HARRIS read for Dr. HOWARD H. KELLY a paper entitled

GONORRHŒAL TUBO-OVARIAN ABSCESS — RIGHT SIDE—LAPAROTOMY—REMOVAL OF FALLOPIAN TUBE AND OVARY—RECOVERY.

In this case the disease of the woman could be directly traced to gonorrhœal infection on the part of the husband, although she had never, to her knowledge, had any uterine discharge other than blood, and had always been regular in her menses during the three years of her married life.

At fourteen Mrs. H. commenced to menstruate; at seventeen she weighed one hundred and thirty-five pounds, although of medium stature, after which she failed somewhat in health from an abscess of a finger, and when married at twenty was quite spare, as was also her husband. Both she and her husband are of German blood. The husband has since reached a maximum of one hundred and sixty-seven pounds. Three years before marriage Mr. H. contracted a gonorrhœa, of which he thought himself cured in three weeks. At the time of his wedding, however, he was suffering from orchitis, which he attributed to a strain, and which lasted for some time. The sickness of his wife commenced with her first menstrual epoch, two weeks after marriage, at which time she had excessive abdominal pains, fever, vomiting, and constipation, and was two weeks in bed; since which time she has had repeated attacks of the same kind.

She came under the care of Dr. Kelly on March 31, 1886, after having been under treatment for a supposed uterine fibroid during five months. After a month's preparation by enemata, vaginal douches, and tonics, it was determined to operate upon her for the removal of a tumor located between the right side of the uterus and the pelvis, and evidently firmly attached in its seat. This tumor had an elastic feel; had greatly affected the health of the patient by the production of menstrual prolongation and excess, and was evidently giving rise to symptoms of septicæmia.

The tumor was removed May 5, 1886, and in separating it from its bed a small cyst containing fetid pus was ruptured. This necessitated irrigation and cleaning of the viscera with hot carbolized water, to avoid septic peritonitis. The pulse rose to 160 the next day, but fell in four days to 76, with a temperature of 98.8°. When examined after removal, the tumor, which was about two and one-half inches in diameter, was found to

consist of an ovary and dilated Fallopian tube, forming a common cavity filled with from two to three ounces of thin, greenish, highly fetid pus.

A drainage-tube was used for four days; the sutures were removed in a week. The patient made a good recovery.

OVARIAN TUMOR.

Dr. T. M. DRYSDALE exhibited the specimen, and remarked: Five weeks ago I removed an ovarian tumor, which, apart from the interest which attaches to each case of this kind, was personally important to me from the fact that it completed my one-hundred-and-fiftieth ovariotomy. Twenty-five years since—April 23, 1861—I performed my first operation of this kind. At that time, as you are aware, the procedure was not in such favor in the profession as it now is, and the operators were few: in fact, I believe I was the first after the late Dr. Washington L. Atlee who operated in this city.

My success has been encouraging. In each series of fifty the mortality has grown less, and the results more and more satisfactory; but, as I expect to present a report of the whole number of cases to you in a short time, I will not now anticipate what will then be stated in regard to these results, further than to say that of the one hundred and fifty cases I have lost twenty.

This tumor was removed from an unmarried lady, 20 years of age, who first consulted me in February for an abdominal enlargement. She was extremely thin and delicate-looking, but said she had enjoyed good health until attacked by the present disease; since then she had emaciated rapidly, her general health had failed, her stomach had become irritable, and her appetite deficient. She had an unnaturally red tongue, and a feeble pulse, which varied from 110 to 140 beats in a minute.

She first menstruated when sixteen years of age, with great pain and excessive flow. Since then she had always suffered agonizing pain during menstruation, but had been regular until within the last six months; during this time she changed every two weeks, flowing for two or three days. For the last month she had a thin, sanguineous discharge every week.

She first noticed enlargement about eighteen months before I saw her. The whole abdomen swelled as if distended with wind, for which it was mistaken, her physicians treating her for a long time for dyspepsia. The increase in size had been very rapid in the last six months. On examination, the abdomen was found to measure thirty-seven inches around its greatest circumference, and was distended by a tumor of irregular shape and consistence. There was dulness on percussion everywhere except in the epigastric region and over the right flank. No fluctuation could be detected except over a small portion in the left side, about the level of the umbilicus, which was evidently cystic. A hard mass could be felt just below this, which appeared like an independent growth. On vaginal examination the cervix uteri was found to be small and flattened against the pubic bone by a hard tumor which nearly filled the pelvis. This mass was found to be continuous with that which was felt to the left of the umbilicus. It was impossible to pass a uterine sound.

I diagnosticated a multilocular ovarian tumor. Assisted by my son, Drs. W. S. Stewart, John S. Stewart, and G. G. Chamberlain, of Middletown, Delaware, I operated April 28. On opening the abdomen, the front of the tumor was seen to be covered by the right broad ligament, which was spread out to a great size and firmly adherent to it. The uterus was turned completely on its axis and fixed by adhesions to the left side of the growth. A large trocar was introduced, but no fluid could be obtained until a cyst was reached high up on the left side. The remainder of the mass was composed of minute cysts and a nearly solid portion, which was that felt in the pelvis and left side before the operation. An incision was made in the wall of the tumor, and, introducing the hand, the interior was broken up as much as possible; yet it was difficult to reduce its size, and I was compelled to enlarge the abdominal incision to about eight inches in length before I could get the tumor through it. The adhesions to the broad ligament and uterus were then detached, as well as some omental adhesions; others to the wall of the right side of the pelvis still held firmly. These were finally broken down, and the tumor, which proved to be of the right ovary, withdrawn. The pedicle, which was very thick and vascular, was secured by ligatures. From the surface of the adhesions there was an active and persistent bleeding, which gave considerable trouble; but this was controlled without the use of ligatures, except two to vessels deep in the pelvis. After thoroughly cleansing the cavity of the abdomen and pelvis, the wound was closed with wire sutures; a compress of absorbent cotton and a flannel bandage completed the dressing. I will not weary you with the details of her progress towards recovery. The only unpleasant symptoms she had were vomiting and violent colicky pains, which lasted at intervals for two days. Her highest temperature in the axillæ was 101½°. Her pulse varied from 100 to 128. She has entirely recovered, and is daily gaining strength.

W. H. H. GITHENS,
Secretary.

TEREBENE given in large doses too frequently repeated has caused nephralgia, congestion of the kidneys, and scanty albuminous urine.

PHILADELPHIA CLINICAL SOCIETY.

A STATED meeting was held April 23, 1886, the President, Dr. John B. Roberts, in the chair.

Dr. Edward R. Stone reported a case of

EXTRAVASATION OF URINE FOLLOWING REPEATED ASPIRATION OF THE BLADDER.

More than three years ago I was called to J. W., æt. 67, who was suffering with retention of urine. He gave the following history. He had always been very healthy until he began to suffer with difficulty in passing water. This had lasted for some time, and was attributed by him to working in wet places, his duties as engineer at the waterworks often requiring him to stand in water and expose himself to taking cold. He had never before had total retention, but the urine often came drop by drop and was voided with great difficulty. Upon examination by the rectum the prostate was found decidedly enlarged. After patient efforts with various catheters, the bladder was reached by the manœuvre of passing a flexible instrument with the stylet to the seat of obstruction; then by slightly withdrawing the stylet the point of the catheter was made to mount over the enlarged third lobe. The patient was instructed in the use of the catheter; and copaiba was found of benefit in relieving catarrh of the bladder, which was aggravating his complaint. From time to time it was necessary to give him assistance when he failed to catheterize himself. Efforts to reach the bladder were always successful until the night of September 17, 1885, when he was found suffering again with retention. He had already tried the catheter, but unsuccessfully, and had injured the urethra by using an instrument which, being partially broken, had allowed the wire to protrude. Careful and repeated attempts were made during the night to reach the bladder. These failing, Dr. W. W. Keen was called in consultation. It was then decided to aspirate the bladder. This was done with a medium-sized instrument, and about one pint of urine withdrawn. By night the re-accumulation was distressing the patient again, and the aspiration was repeated at 7 P.M., and again at 8.10 A.M. next day. Urine withdrawn amounted to rather more than one pint for the two operations, was clear, but rather dark in color. The first puncture was in the middle line, a short distance above the pubes, and the second and third were close to the first. A circle with a radius of one-fourth inch would have included them all.

September 18 (day after first aspiration), at 4 P.M., I was informed that the patient felt better, as some urine was passing. Examination showed that no urine was escaping from the urethra, but it was welling up drop by drop from two of the three punctures, having displaced the adhesive plaster covering them. The bladder could be felt to extend almost to the umbilicus. The aspirator was used again, and, although the puncture was made in the same neighborhood as before and the trocar appeared to enter the organ, no fluid could be withdrawn except a small amount of bloody serum.

Dr. Keen was called again, and the patient was given ether preparatory to the operation of cystotomy. Under the influence of the anæsthetic, however, Dr. Keen succeeded in passing a silver catheter with prostatic curve, and more than one pint of urine escaped. The bladder was thoroughly washed with warm water and the catheter secured in place. Above the pubes a free incision was made through the skin and subcutaneous fat.

The patient did well until the third day, when symptoms of sloughing of the deep cellular tissue became prominent. An offensive discharge began from the wound, and the deep tissues could be seen to be dead and sloughing. At the same time there was moderate fever. The catheter was left *in situ* for four days, and the bladder was frequently washed (three times daily) with a warm solution of borax. After the removal of the catheter there was no further trouble in introducing it, which was done four times in the twenty-four hours, and the bladder washed as before. The sloughing of the deep connective tissue became quite extensive, extending beneath the muscles on both sides almost to the iliac crest, and for a considerable distance above the incision. The sloughing tissue was drawn out and removed as fast as it became loosened, and carbolic acid solution was injected through a soft catheter passed in various directions under the undermined structures. Patient's strength failed rapidly under fever and diarrhœa due to septicæmia, but he rallied as the abscess became clear of sloughing tissue and began to heal; but he sank and died of exhaustion, October 11, twenty-four days after the extravasation of urine occurred. The wound had almost healed, and, although he had not been able to void his urine, the bladder remained free from catarrhal complication. No post-mortem.

Without doubt the patient's death was at least indirectly due to the escape of urine through the punctures in the bladder infiltrating and causing to slough the deep connective tissue. Is it good practice to trust to repeated aspirations? Our case demonstrated, I think, that even the small puncture of the needle may be stretched open, as the bladder again distends, to a sufficient extent to permit urine to escape into the surrounding tissues.

Again, it should not be decided that a catheter cannot be passed until the attempt has been made under an anæsthetic. In this case the instrument was passed after the patient was under the full influence of ether, when it

could not be made to enter the bladder without the anæsthetic. Much organic obstruction plus even a slight amount of reflex spasm may baffle the surgeon, when, with the latter condition annulled by anæsthesia, success may crown his efforts. In this connection, however, it must be borne in mind that the urethra had had complete rest from all manipulation for more than thirty-six hours before Dr. Keen succeeded with the catheter.

Dr. Stone also reported a case of

SPONTANEOUS CURE OF EMPYEMA.

G. H., boy, æt. 2 years and 9 months; has always been healthy, except a convulsion at seven months, due to indigestion; had a slight cold for a few days until March 1, 1885, when he was feverish and had a severe spasm. In the afternoon fever, cough, and restlessness continued, but it was not until March 3 that a diagnosis of pleurisy could be made, his restlessness and excitement preventing an examination of the chest. On that day the respirations were rapid and evidently suppressed, and he complained constantly of pain in his belly. A friction-sound could be plainly heard over the lower lobe of the right lung, in the axillary line. March 9, the right chest was distended to a point about midway between the nipple and the clavicle, and to a corresponding point behind; after which the effusion gradually declined with the cessation of the fever and general improvement in the child's condition.

Early in May he was taken to the country, at which time his condition was fair, although he still coughed and the lower part of the chest remained dull, with impaired respiratory movement. I saw no more of him until November 23, 1885. He was then weak and thin; anorexia complete; daily fever, night-sweats, with painful cough when recumbent; the right chest was largely distended, intercostal spaces obliterated; flatness except in the extreme upper part of the chest. An operation was urged; but the parents hesitated and wanted time to consider it.

On November 25 I was sent for, and found that a large swelling had formed just below the right nipple, measuring about four inches in its greater diameter. This fluctuated and became tense when the child cried, and evidently marked the escape of pus from the pleural cavity.

Dr. Heilman saw the case with me, and, although there were two points where the abscess was about to break, we agreed to withdraw the fluid in the usual way with the aspirator, in order, if possible, to prevent the escape of pus in front. The chest was punctured in the sixth interspace, in a line with the posterior border of the axilla, and a little less than one pint of brownish, inodorous pus withdrawn. The abscess-cavity in front became flaccid and empty, and pressure was made over it with a compress and adhesive plaster. The patient's general condition was much improved by the operation, and all went well until the fifth day, when the skin over the abscess gave way in two points and the child's clothing was found drenched with the discharge. On taking off the dressings, two round openings, about one-sixth inch in diameter, were found, through which the air was whistling back and forth with every respiration. The openings were covered with valves of adhesive plaster, as I feared the draught through them would suck in some particles of threads of the oakum which was applied to absorb the pus. No other application than this was made. The discharge of pus continued very free for several days, then gradually became less profuse and more watery, and after one month entirely ceased. It remained throughout perfectly sweet and inodorous. The patient's condition rapidly improved, and he is now entirely well, except that there is some dulness posteriorly, with rather feeble respiration in the lower lobe. This case is of importance as showing what might be called the natural history of empyema; it is remarkable as demonstrating that the air is not always charged with deadly germs which must be destroyed by antiseptic solutions. The ordinary air had free access to the pleural cavity of this boy for many days, without causing the least disturbance. What a brilliant triumph this would have been for antiseptic surgery if I had decided to enlarge the sinus and wash out the pleural cavity with antiseptic solution, instead of adopting a purely expectant plan of treatment!

Dr. Stone then reported a case of

RECOVERY FROM SEVERE DIPHTHERIA WITH NUMEROUS COMPLICATIONS.

W. H., æt. 4 years, healthy boy, but slender and not very robust. His mother's family is consumptive, and she has a tendency to phthisis with implication of the left apex.

On December 7, 1885, he was noticed to be dull and feverish. On the 8th, moderate fever and languor, throat red, with false membrane on both tonsils. On December 10 the deposits had extended until they completely covered fauces and pharynx; fever moderate, pulse 120 and feeble; is dull and apathetic.

December 12. No change in throat; serous discharge issuing from the nostrils, which were observed to be lined with diphtheritic membrane as far as could be seen; respiration entirely through the mouth. The child's strength rapidly failed until December 15. He lies quiet in a somnolent state and is with difficulty aroused, and refuses to attempt to swallow anything; pulse 140 per minute and feeble; temperature (A.M.) 102°. He remained in this desperate condition for about forty-eight hours, when he slowly revived. General condition better, but the nose and

throat still thickly covered with deposit. He attempts to drink a little water.

By December 20 there was decided improvement, the throat clearing and one nostril becoming pervious; is taking milk and stimulants freely; fever less; pulse 120 and stronger.

December 23. Fresh access of fever in the evening, and violent excitement and restlessness; he rolls his head continually and moans as if in pain; again refuses to swallow anything; fever and pain continued with evening exacerbations, and on December 25 a discharge was discovered issuing from the left ear, and the mother asserted that he was quite deaf.

December 26. Both ears discharging, and patient quieter; moderate evening fever; both nostrils seem quite clear; he can with difficulty be persuaded to take liquids,—much of which, however, returns through the nose. The throat is free of deposit; but there is evident paralysis of the palate-muscles.

After the above note he gradually improved; but from January 2 to 8 there was great irregularity of the heart's action. Examination of the ears from time to time showed a succession of furuncles deep in the meatus, which entirely concealed the membrana tympani.

February 1. He began to cough, but examination was negative in results; he has fever in the evening and night, with sweating towards morning.

February 3. Cough very troublesome at night, and painful. Patient evidently suppresses cough and complains when handled, but auscultation only reveals a few coarse râles; respirations 40 per minute, pulse 110; he is losing his appetite, and sleeps badly; fever remittent (99° to 100°, A.M.; 102° to 103°, P.M.).

February 5. Signs of effusion in the right pleura; no friction-sound detected.

February 12. Effusion reached its maximum; dulness to a point midway between nipple and clavicle in upright position, subsiding to much lower point when recumbent. After this the effusion rapidly disappeared, and was associated with a severe diarrhœa and free evacuation of urine, his general symptoms improving *pari passu*.

February 19. Effusion about disappeared, some dulness, however, remaining at the base of the lung, with feeble respiratory sounds; the ears continued to discharge in a lessened degree, and hearing improved.

About the middle of March he began to be able to stand alone, but it was several days longer before he was able to walk. About the same time he commenced again to use simple words, the power of speech having been in abeyance ever since he became very ill. Emaciation was extreme; I have never seen a person more wasted; but flesh was resumed rapidly during convalescence. Dr. Heilman examined the ears with me, and found evidence of middle-ear disease with perforation.

Condition April 17, 1886: looks almost as well as before illness, but is somewhat thinner; ears have ceased to discharge, and there is very little impairment of hearing; he has no cough, but his breathing is rather rapid, especially after exertion; the right chest is somewhat impaired in movement, and there is slight dulness on the right posteriorly, with feeble respiratory murmur; respiration on left exaggerated; his appetite is not so good as during the early part of convalescence, but he drinks milk freely; is bright and playful.

The treatment in this case may be summarized as follows: tinct. ferri chlor. and hydrarg. chlor. corrosiv. by the mouth, quinine by suppository, the almost constant employment of a spray from a steam-atomizer of a solution of carbolic acid in lime-water and the injection of the same frequently into the nostrils, followed by insufflation of sulphur; whiskey (maximum dose, f℥iij in twenty-four hours) with milk; insufflation of boric acid; and, later, iodoform for the otorrhœa. Tincture of digitalis was given freely when the heart failed, and digitalis and ammonia (with iodine externally) were used to combat the pleurisy.

Too much credit cannot be given to the mother's devoted and unremitting attention. Her efforts to save her only child never faltered; and while he lay in a semi-comatose state she patiently administered, drop by drop from a medicine-dropper, whiskey and milk, which trickling into the throat would be unconsciously swallowed. I believe that these minimum doses of nourishment were sufficient to tide him over a critical period, during which he would have succumbed under less assiduous nursing.

DISCUSSION.

In the discussion which followed the reading of Dr. Stone's cases, Dr. Bruen spoke of a case in which an over-distended gall-bladder was aspirated with a very fine needle. Peritonitis set in, which terminated fatally. He felt as though he would like to be sure that the gall-bladder and peritoneum were adherent before using the aspirator hereafter.

He mentioned two cases of empyema in adults in which the aspirator was used, pus withdrawn, and after a few months there were evidences of thickened pleuræ. He has resorted to resection of the ribs in a few cases of empyema, and spoke of the necessity of preserving enough of the periosteum to cover the ends of the ribs; otherwise necrosis is apt to occur.

Dr. Charles H. Thomas said it is a question in his mind whether "it is best to *repeat* aspiration of the bladder: it may be done *once* in order to gain a few hours' time." He mentioned a case of ovarian tumor in which the aspirator was used; only a small quantity of fluid was

drawn off; in a short time there was a rigor, and death occurred in three days; the autopsy revealed the evidences of peritonitis. Exploratory abdominal incisions should be considered, rather than aspirating.

Dr. Henry Hartshorne spoke of a case of empyema in the medical ward of the Pennsylvania Hospital in the year 1840, in which spontaneous rupture occurred. The case terminated in recovery.

Dr. Stone, in closing the discussion, said that in children it was rarely necessary to resect the ribs for empyema; that they often recovered after simple withdrawal of the fluid.

Dr. John B. Roberts then gave a verbal report of a case in which

IMMINENT DEATH IN ACUTE PNEUMONIA WAS AVERTED BY PHLEBOTOMY.

The patient was a man, æt. 55. After exposure to cold, pneumonia developed in the lower lobe of the left lung. One evening he was in great distress; respirations numbering 45 per minute; on percussion, dulness and flatness were found over both lungs; on auscultation, numerous coarse and some fine râles were heard on both sides; lips cyanosed; death imminent. Dry cups were used over the chest posteriorly, and phlebotomy to the extent of twelve ounces practised. The respirations immediately fell to 35 per minute; the patient became comparatively comfortable; slept some during the night, and was much better the next morning. Convalescence went on uninterruptedly from that time.

Dr. Henry Hartshorne remarked upon the contrast between the now prevailing treatment of pneumonia and other acute inflammatory affections and that of forty years ago. Results do not show that the change has been to the advantage of medical practice. Formerly, even under hospital treatment, death from pneumonia was not frequent; in private practice it was rare.

Dr. L. P. Gebhard, near the end of half a century's large experience, said that he had never lost a case of uncomplicated pneumonia. Now we hear very different accounts. Men in the vigor of life not infrequently die of the disease after a few days of illness.

Dr. Hartshorne has reached the conviction that a radical mistake is prevalent in regard to the practical indications in simple acute pneumonia. What have we therein as prominent pathological conditions?

1. Obstruction to the circulation at the seat of local inflammation.

2. Resulting general increase of vascular tension.

3. Arrest or considerable diminution of the secretions of the skin, kidneys, and bowels.

In all these conditions there is no indication for alcohol, none for quinine, none for opium. The old-time remedy for the abnormal vascular tension of the first stage was the abstraction of a moderate amount of blood, according to the previous vigor of the patient, by venesection, cupping, or leeching. Having been brought up under this régime, Dr. Hartshorne can give personal testimony to its safety and frequent advantage. It is astonishing that in these days of daring surgery, of ovariotomy, and laparotomy, for various occasions, physicians should be so much afraid of taking from a patient a few ounces of blood.

An adjuvant for such a measure of relief in the early stage of pneumonia, or substitute for it in doubtful cases, is the use of saline purgatives and diaphoretics. These also appear to be in recent practice very often, perhaps generally, neglected, Dr. Hartshorne believes, to a great disadvantage.

Frankly speaking, under the following plan of practice six out of ten cases of acute pneumonia in persons of previously good health, between twenty and fifty years of age, may be reasonably expected to die,—viz., treating them from the start with twenty grains of quinine daily, a tablespoonful of whiskey every two or three hours, and a quarter of a grain of sulphate of morphia every six or eight hours. If any patients recover under such treatment, it is an escape probably due to the use of large hot poultices kept applied to the chest; an excellent application.

Another method of treatment Dr. Hartshorne has had ample experimental reason for believing will be followed by recovery in at least eight out of ten cases of simple acute pneumonia in persons not over sixty years of age, of previously good health,—viz., the abstraction, on the first, second, or not later than the third day, of a few ounces of blood from the arm in the stronger patients, by cups or leeches in those of less previous vigor of system; about the same time, a decidedly purgative dose of some mild saline medicine; afterwards, every two or three hours, a saline diaphoretic, citrate, acetate, or nitrate of potassium, or acetate of ammonium; in the most violent cases, in patients of average constitution, tartar emetic during the first three, four, or five days,—not more than one-sixteenth to one-twelfth of a grain every three or four hours, not allowed to cause gastric distress; a warm poultice also being kept applied and renewed over the whole anterior part of the chest until the worst is over.

Should this practice be just now out of fashion, it may be very earnestly said that it is better to be old-fashioned than to lose a considerable number of patients dying of a malady like pneumonia, which *ought not to be mortal.*

MARY WILLITS, M.D.,
Reporting Secretary.

RHUS-POISONING.—Much discussion has been given lately to the treatment of rhus-poisoning, but we know of no better dressing than a solution of baking-powder, followed by lard beaten up with lime-water.

REVIEWS AND BOOK NOTICES.

A Treatise on Therapeutics: comprising Materia Medica and Toxicology, with Especial Reference to the Application of the Physiological Action of Drugs to Clinical Medicine. By H. C. Wood, M.D., LL.D. Sixth Edition, Revised and Enlarged. Philadelphia, J. B. Lippincott Company, 1886.

The author has taken advantage of the opportunity for revision (made necessary by the changes introduced into the last edition of the Pharmacopœia) to make some important additions. An article upon Cocaine has been introduced, the chapter upon Disinfectants entirely rewritten, and he has spared no effort to have the work fully and correctly represent the best therapeutic deductions of the day.

The former main divisions are preserved of Drugs and Forces (under which the therapeutics of Caloric and Electricity are considered), and an appendix contains instructions upon Prescription-Writing and various tables. The work represents a large amount of painstaking research by the author, and shows his complete mastery of the subject. Its adoption as a text-book by a number of our medical colleges is of itself warrant sufficient for its value to students, which is further demonstrated by its many evidences of undiminished vitality in its sixth edition.

A Hand-Book of the Diseases of the Eye and their Treatment. By Henry R. Swanzy, A.M., M.B., F.R.C.S.I., etc. With Illustrations. New York, D. Appleton & Co., 1884.

This is a clearly-written manual which has been prepared especially for the use of students attending the Ophthalmic Hospital, but is also serviceable as a book of reference for those engaged in the clinical study of eye-disease. Omitting the anatomy of the organ of vision, the subject is introduced by a study of elementary optics, which leads at once to a consideration of errors of refraction and accommodation, and the ophthalmoscope. The diseases of the various eye-structures are studied systematically, and judicious observations made with regard to treatment. In the paragraphs devoted to astigmatism the subject is despatched rather briefly, and the impression might be left that astigmatism occurs only in the vertical and horizontal meridians. On the whole, the work is carefully written, and is evidently that of an experienced surgeon. Holmgren's color-test and Snellen's "Sunrise" are appended to the work.

An Aid to Materia Medica. By Robert H. Dawbarn, M.D. New York, J. H. Vail & Co., 1884. 12mo, pp. 86.

This is an interleaved compendium containing the officinal drugs and their preparations, with doses. Prescription-writing by the metric method is taught by an easy plan in the appendix.

NEW REMEDIES AND CLINICAL NOTES.

Phosphor-Necrosis.—Dr. W. C. Jacobs, having a connection with one of the largest match-factories in the United States (at Akron), has had unusually favorable opportunities of observing this disease. He presented a paper upon this subject at the last meeting of the Ohio Medical Society, in which he described the process of match-making in detail. About one-seventieth of a grain of phosphorus is contained in each match-head. It is particularly in the dipping- and packing-rooms that the danger of acquiring phosphor-necrosis is greatest. Here the matches are handled more, and in damp weather fumes are given off. The effects of phosphorus are at first local. In his ten cases all started from unsound teeth. Gums kept from the teeth by tartar is also a cause. It is generally thought that the patient in order to acquire the malady must have been exposed for a long time to the fumes of the phosphorus, but this is not necessarily the case. The essayist knew one girl who was exposed for only two years. The physician rarely sees it in the initial stage. Generally the patient comes a few days after having a painful carious tooth extracted, and wishes to know why he still has pain.

Treatment: tincture of myrrh well diluted is a good mouth-wash. Deep incisions had not been so successful in the essayist's hands. He is a firm believer in the early operation. As to prevention: first, he would allow no one to work in the dipping and packing department who has not sound teeth; second, good ventilation is essential; third, operators must not be allowed to eat dinner in their workrooms, and should be required to keep their hands clean; fourth, for convenience, keep a solution of the alkaline carbonates as a mouth-wash.

Dangers of Carbolic-Acid Dressings.—Dr. Weaver, of Dayton, reported a case at the Ohio State Medical Society where a young woman came to him with her finger perfectly dead, caused by an application of carbolic acid. It had been applied accidentally, and immediately wiped off. Gangrene set in in two or three days. Dr. Underwood reported the case of a girl, æt. 10, who burnt her finger. Her mother, having heard that carbolic acid was good for burns, applied it. The finger remained wrapped up till morning, when it was found dead, the doctor called, and the finger amputated.

Sloughing following Carbolic-Acid Injection into a Hydrocele.—Dr. William

C. Wile reports a case of disastrous results following the injection of pure carbolic acid for the radical cure of hydrocele. A farmer went to a physician's office for treatment for a hydrocele. Carbolic acid was injected into the sac, and in the course of a few days there were symptoms of carbolic-acid poisoning and intense inflammation and sloughing of the scrotum. Free incisions, hot applications, and stimulants were successful in averting the threatened fatal results, but convalescence was long and tedious.

MISCELLANY.

THE LEGAL RIGHT OF CHINESE TO WASH CLOTHING IN CALIFORNIA.—The Chinese must be allowed to carry on the laundry business in the California towns, is the purport of a recent decision of the United States Circuit Court. The officials in one of the large cities of that State, with the intent to drive the Chinese away, but on alleged grounds of health and public policy, passed an ordinance prescribing the limits within which the laundry business could be carried on. It turned out that these limits comprised a very unhealthful part of the city, and the better portions were excluded from any intrusion on the part of the Celestials. This ordinance was thought unjust and illegal, and the question was taken into the United States courts, which have now held that no discrimination like that intended can be imposed.

The court holds that cleanliness is necessary to civilization, necessary to the health, comfort, and happiness of a civilized people. Without it, every man, woman, and child would individually himself or herself become a nuisance to his or her neighbor. The right to labor in this or any other honest, necessary, and in itself harmless calling where it can be most conveniently, advantageously, and profitably carried on is one of the highest privileges and immunities secured by the Constitution to every American citizen, and to every person residing within its protection.

The police power is invoked to sustain this ordinance, but the police power extends only to the regulation of the necessary pursuits of man, so that they shall not become in their mode of exercise unhealthy, noisome, dangerous, or otherwise detrimental or injurious to the common interests of the community. It does not extend to the destruction or driving to inconvenient and unprofitable localities of necessary or useful occupations carried on in such a manner as to be harmless.

THE KENTUCKY STATE MEDICAL SOCIETY elected the following officers for the ensuing year: President, Dr. W. H. Wathen, Louisville; Senior Vice-President, Dr. J. H. Harwood, Shelbyville; Junior Vice-President, Dr. J. H. McKinley, Winchester; Permanent Secretary, Dr. J. Steel Bailey, Stanford; Assistant Secretary, Dr. F. C. Simpson, Bardstown; Treasurer, Dr. Edward Alcorn, Hustonville; Chairman of Committee of Arrangements, Dr. J. G. Brooks, Paducah; Board of Censors, Dr. D. S. Reynolds, Louisville, Chairman; Dr. A. W. Willis, Winchester; Dr. A. Sargent, Hopkinsville; Dr. J. H. Loscher, Henderson; Dr. W. E. Poynter, Midway; Dr. J. W. Harwood, Shelbyville. The next place of meeting, Paducah, the third Wednesday in June.

BACILLUS OF DYSENTERY.—Two Italian physicians (in the *Rivista Internazionale di Medicina e Chirurgia*, No. 12) allege that they have discovered that dysentery is caused by the presence of a bacillus not yet described. This parasite they have invariably detected in the fæces of dead patients who have succumbed to dysentery, in the air of hospital wards where the patients were congregated, and in the water of two wells which had been exclusively used for these patients.

A NUTRIENT TONIC.—The combination of calisaya and aromatics with albuminoids obtained from beef, as found in the Liquid Beef Tonic of Colden, has been found useful especially in chronic diseases accompanied by debility, weakness, loss of appetite, and indigestion, and in incipient phthisis.

A PERMANENT EMULSION OF COD-LIVER OIL.—William F. Kidder & Co., of New York, have succeeded in producing an emulsion of cod-liver oil which under all conditions of temperature will retain its smooth and cream-like consistency without any separation of the oil. After years of experimentation with their hydrated oil, or hydroleine, they have finally succeeded in making a perfect and permanent emulsion, which they claim will keep in any climate for any length of time without the least separation. As now offered to the profession, the medicinal qualities are unaltered, with the exception of a slight change in its consistency (being somewhat thicker), and the preparation possesses the same composition and therapeutic value as before.

A PERFECTED PESSARY AND ABDOMINAL SUPPORTER.—Dr. Ernest I. Hofmann, of New York, is the inventor and manufacturer of a Perfect Anatomical Pessary, which is made of soft rubber, and which is distinguished from all others by the form, as it is accurately shaped to the natural dimensions of the upper portion of the vagina. For the treatment of prolapsus and ulceration occurring in married women especially it has given complete satisfaction. The value of a good abdominal supporter is scarcely less than that of a good pessary. The Perfected Adjustable Abdominal Supporter of Dr. Hofmann we regard as a great improvement over the old form.

NOTES AND QUERIES.

THE Conference of the various Committees appointed by Scientific bodies, and Eminent Alienists, to agree upon a uniform classification of Mental Diseases in order to secure the best basis of International Statistics of the Insane, in co-operation with the International Committee appointed at the Antwerp Congress, held by the Belgian Society of Mental Medicine last autumn, will be held at Saratoga, New York, on September 8, 1886, at ten o'clock A.M. Dr. Pliny Earle has been invited to preside.

EDITOR MEDICAL TIMES:

DEAR DOCTOR,—I find in the *Medical Times* of August 21, 1886, under the head of "New Remedies and Clinical Notes," a paper read before the Dakota Medical Society on the treatment of diphtheria by Dr. M. Ware, in which the doctor gives as the new treatment the thorough washing of the throat with a solution of salt and water, and the use of iron, brandy, etc.

If Dr. Ware will examine the *Cincinnati Medical and Surgical News* (new series, vol. ii. No. 4, p. 104) for April, 1861, he will find a report of four hundred and eighty-nine cases of diphtheria treated by the writer during the winter of 1860 and 1861. Four hundred and eighty-eight of these cases were treated by the free and thorough use of the chloride of sodium as a gargle and wash, and also the internal use of quinine, iron, etc.

The writer has for over twenty-five years used salt alone as a wash; and, combined with chlorate of potassa and bicarbonate of soda in solution, he has given it in full doses internally every hour or two. Iron, whiskey, brandy, and quinine he always gives freely.

Yours truly,

C. R. EARLEY, M.D.

RIDGWAY, PA., August 30, 1886.

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 8, 1886, *TO AUGUST* 28, 1886.

LIEUTENANT-COLONEL DAVID L. MAGRUDER.—Promoted to Surgeon with rank of Colonel, July 26, 1886, *vice* Brown, retired.

MAJOR CHARLES T. ALEXANDER.—Promoted to Surgeon with rank of Lieutenant-Colonel, July 26, 1886, *vice* Magruder, promoted.

CAPTAIN HENRY M. CRONKHITE, ASSISTANT-SURGEON.—To be Surgeon with the rank of Major, July 26, 1886, *vice* Alexander, promoted.

FREEMAN V. WALKER, of Georgia.—Appointed Assistant-Surgeon, July 27, 1886, *vice* Cronkhite, promoted.

MAJOR J. C. BAILY, SURGEON.—Granted one month's leave of absence. S. O. 111, Division of the Atlantic, August 17, 1886.

MAJOR A. A. WOODHULL, SURGEON.—Granted leave of absence for fourteen days, to take effect on or about September 1, 1886. S. O. 197, A. G. O., August 25, 1886.

MAJOR E. BENTLEY, SURGEON.—Granted one month's leave of absence, and at its expiration to report for duty as post-surgeon at Little Rock, Arkansas. S. O. 113, Division of the Atlantic, August 18, 1886.

MAJOR W. S. TREMAINE, SURGEON.—Sick-leave further extended six months. S. O. 187, A. G. O., August 13, 1886.

MAJOR M. K. TAYLOR, SURGEON.—Leave extended one month. S. O. 195, A. G. O., August 23, 1886.

CAPTAIN J. V. LAUDERDALE, ASSISTANT-SURGEON.—Granted leave of absence for two months, with permission to apply for one month's extension, when his services can be spared. S. O. 195, A. G. O., August 23, 1886.

CAPTAIN L. Y. LORING, ASSISTANT-SURGEON.—Leave of absence granted him in S. O. 59, August 2, 1886, Division of the Pacific, extended two months, on surgeon's certificate of disability. S. O. 189, A. G. O., August 16, 1886.

CAPTAIN B. D. TAYLOR, ASSISTANT-SURGEON.—When relieved by Surgeon Bentley, to proceed to Jackson Barracks, Louisiana, and report for duty as post-surgeon. S. O. 113, c.s., Division of the Atlantic.

FIRST-LIEUTENANT WILLIAM E. HOPKINS, ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Angel Island, California. S. O. 61, Division of the Pacific, August 6, 1886.

LIEUTENANT WILLIAM C. BORDEN, ASSISTANT-SURGEON.—Assigned to temporary duty at Fort Bridger, Wyoming Territory, during absence of Assistant-Surgeon Crampton. S. O. 100, Department of the Platte, August 9, 1886.

FIRST-LIEUTENANT CHARLES M. GANDY, ASSISTANT-SURGEON.—On expiration of his present leave of absence, relieved from duty in the Department of the East and assigned to duty in the Department of Texas. S. O. 195, A. G. O., August 23, 1886.

FIRST-LIEUTENANT CHARLES F. MASON, ASSISTANT-SURGEON.—Assigned to duty as post-surgeon at Plattsburg Barracks, New York. S. O. 113, Division of the Atlantic, August 18, 1886.

LIEUTENANT PHIL. G. WALES, ASSISTANT-SURGEON.—Relieved from duty in the Department of the Columbia, and to report in person at headquarters, Division of the Pacific, for further orders. S. O. 62, Division of the Pacific, August 9, 1886.

LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM AUGUST 7, 1886, *TO AUGUST* 28, 1886.

PASSED ASSISTANT-SURGEON CHARLES. D. RUSH.—Detached from the Receiving-Ship "Franklin" and ordered to the U.S.S. "Pinta."

PASSED ASSISTANT-SURGEON W. G. G. WILLSON.—Detached from the U.S.S. "Pinta;" ordered home and wait orders.

DR. E. P. STONE.—Commissioned an Assistant-Surgeon in the Navy, August 5, 1886.

ASSISTANT-SURGEON A. R. WENTWORTH.—Ordered to temporary duty at Navy-Yard, League Island, Pennsylvania.

PASSED ASSISTANT-SURGEON G. C. LIPPINCOTT.—Ordered to Annapolis, Maryland, for temporary duty as a member of the Medical Examining Board.

MEDICAL-INSPECTOR JOHN H. CLARK.—Ordered to special duty, Portsmouth, New Hampshire, and Widow's Island.

MEDICAL-INSPECTOR D. KINDLEBERGER.—Ordered to Hospital, Washington, D.C., October 1, 1886.

MEDICAL-DIRECTOR A. L. GIHON.—Ordered to Hospital, Mare Island, California, October 15, 1886.

MEDICAL-INSPECTOR SOMERSET ROBINSON.—Detached from Hospital, Mare Island, California, October 15, 1886, and wait orders.

MEDICAL-INSPECTOR J. C. SPEAR.—Ordered to Naval Laboratory, New York, September 28, 1886.

MEDICAL-DIRECTOR DELEVAN BLOODGOOD.—Ordered to Hospital, Norfolk, Virginia, September 29, 1886.

MEDICAL-DIRECTOR J. Y. TAYLOR.—Ordered to Naval Laboratory, New York, September 29, 1886.

MEDICAL-DIRECTOR R. C. DEAN.—Detached from Naval Hospital, New York, and wait orders.

SURGEON W. J. SIMON.—Detached from the U.S.S. "Constellation," and special duty at Naval Academy, Annapolis, Maryland.

ASSISTANT-SURGEON C. P. HENRY.—Ordered to Hospital, Philadelphia, Pennsylvania.

PASSED ASSISTANT-SURGEON H. B. FITTS.—Detached from Hospital, Philadelphia, Pennsylvania, and wait orders.

ASSISTANT-SURGEON E. P. STONE.—Ordered to Receiving-Ship "New Hampshire."

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE WEEK ENDING AUGUST 7, 1886.

HUTTON, W. H. H., SURGEON.—To proceed to Key West, Florida, for temporary duty, August 7, 1886.

BEVAN, A. D., ASSISTANT-SURGEON.—Ordered to examination for promotion, August, 1886.

WILLIAMS, L. L., ASSISTANT-SURGEON.—When relieved at Buffalo, New York, to proceed to Mobile, Alabama, for temporary duty, August 2, 1886.

PHILADELPHIA, SEPTEMBER 18, 1886.

ORIGINAL COMMUNICATIONS.

PURPURA HÆMORRHAGICA.

Read before the Pennsylvania State Medical Society

BY FRANK WOODBURY, M.D.,

Professor of Materia Medica, Therapeutics, and Clinical Medicine in the Medico-Chirurgical College of Philadelphia.

HEMORRHAGIC purpura, the morbus maculosus of Werlhof, is a well-marked, easily-recognized morbid state, of sufficiently frequent occurrence to warrant consideration, and I believe that the cases which I now report will be found to possess features of sufficient interest to repay us for the time devoted to their discussion. Purpura derives its name from the dark color of its lesions in the skin and mucous membranes. It may or may not be hemorrhagic and accompanied by bleeding from mucous tracts, but it would certainly be an error to classify it, as did Willan and Bateman, among the exanthemata. Similar lesions from petechiæ, varying in size, number, and form, we are familiar with in diseases characterized by profound alteration of the blood, the type of which may be seen in malignant typhus, confluent smallpox, black measles, and cerebro-spinal fever. They are sometimes present in cases where the blood suffers from some vice of nutrition, as in scorbutus, and are also classed among the effects of the toxic action of certain drugs. It has been frequently observed that the peculiar eruption, with or without external loss of blood, seems to occur as the direct result of depression of the powers of life. Impaired nutrition, exhaustion following profuse uterine hemorrhages, or exposure to cold may be the immediate or exciting cause. Doubtless, cases occur in which several causes combine. Pathologists are not agreed whether the blood is alone at fault, or the capillary vessels and arterioles are also in a pathological state, so that they yield and rupture more readily than in health.

It seems reasonable to suppose, as suggested by Fagge, that marked alterations in the crasis of the blood may soon be followed by disease of the smaller vessels, and thus both actively participate in the morbid process.

Excluding from consideration instances in which purpura occurs symptomatically in the progress of some recognized and well-defined disease, there still remain a group of non-febrile cases in which the painless, indelible, slightly-elevated spots or blotches upon the skin and mucous surfaces are the prominent, and apparently the only tangible, evidences of presence of actual disease, except the tendency to oozing of blood from the mucous membranes. Such, for the want of a more distinctive appellation, are called cases of purpura or hemorrhagic purpura. The name is objectionable, since it is based simply upon the most conspicuous clinical characters, but, as a provisional title, will serve our present purpose.

During the past year two cases both of which possess features of interest came under my charge, suffering with hemorrhagic purpura. In neither was there a family history of hæmophilia. In one, the first attack was fatal, the duration of the disease being five days; in the second, the primary attack, though severe, was survived, and was followed by a second and a third attack. Their histories are very briefly as follows:

G., 23 years of age, white, born in Philadelphia, of German parents, with a family history of struma, came to me last July for an opinion as to the advisability of going to Colorado for his health, which he had been recommended to do by a physician under whose care he had placed himself temporarily. The previous year he had been to California for a month or more on a business and prospecting tour. He had gained flesh quite rapidly while away, and when he first returned he weighed one hundred and eighty-three pounds. I had not seen him again until he called upon me last July. He then startled me by his changed appearance. He had lost within a period of less than ten months over sixty pounds in weight. Although he had no cough or expectoration, with the exception of an occasional spasmodic expulsion of air, as if to clear the throat (and of which he seemed unconscious), and although he did not complain of pain or discomfort in the chest, yet I had no difficulty in recognizing it as a case of acute pulmonary phthisis. His shallow and frequent respirations, dyspnœa upon exertion, accelerated pulse, curved and livid finger-nails, enlarged area of liver-dulness, rapid and extreme emaciation, with a temperature under his tongue of 102°, confirmed my first opinion, and induced me to write a

note to his father, to whom I explained the grave character of the disease, and the rapid approach of a fatal termination.

With this in mind, I opposed Colorado, and suggested a more accessible place. Upon my recommendation, he was sent to Kane, McKean County, in this State. For the subsequent notes of this case I am indebted to Dr. Thomas Lancaster, who happened to be staying at the Thomson House, where the patient was sent. He reached Kane about the 1st of last August. He soon gained in weight and strength, could eat and sleep well, and took daily exercise for about two weeks, when he consulted Dr. Lancaster with reference to some petechial spots upon both legs below the knee. They were painless, dark-colored, very small, and slightly elevated above the surrounding surface of skin. Two days later he took a long drive, lasting nearly all day, and possibly he became chilled: when he returned he appeared quite exhausted.

August 17.—Examination of the spots revealed a change in size and color: they had become larger and lighter. The legs were spotted and mottled, like a trout's back, from the ankles to the knees. There was no œdema and no tenderness. One or two spots, small and very dark, were now observed upon the face and front of the chest. There were also three spots, as large as a split pea, dark-colored, and projecting from the surface of the inside of the lips and the dorsum of the tongue.

August 18.—Unable to leave his room. The spots upon the lips and tongue looked like small aneurisms by anastomosis. There was bleeding from the nose after getting to bed, which continued nearly all night. It was finally checked by the use of a compress wet with alum-water.

August 19.—After the nose had stopped bleeding, oozing occurred from the larynx (or pharynx ?). He was now ordered oil of turpentine, fifteen minims every three hours; and several drachm-doses of fluid extract of ergot were administered through the day without effect.

August 22.—Began to pass bloody urine last evening, and has lost considerable. There was no hemorrhage from the bowels. The vital forces much depressed, but he was rational, and ate a hearty dinner. The spots were a little lighter in color, becoming livid upon the legs; he said that he felt weak, but otherwise well. During the night he had another profuse hemorrhage from the nose, mouth, and kidneys, and died of asthenia about four o'clock in the morning. No autopsy.

There is one point in the history of this patient which deserves to be mentioned. He had been irregular in eating and in drinking, about two years before this illness began, and subsequently he took quantities of patent medicines of all kinds for the relief of dyspepsia, from which he suffered. He had had no other sickness that he was aware of during late years.

At the time of going to Kane he was ordered to take—to steady his heart—Niemeyer's pills of quinine, digitalis, and opium, and he was taking these when the purpura first appeared.

The second case was that of Mrs. X., a dressmaker, 32 years of age, born in France. In 1882, acquiring chills and fever at Torresdale, Pennsylvania, and not being relieved by ordinary treatment, she went back to France, where she again suffered with it. She did not finally become free from malaria until the spring of 1885, after her return to this country, when she first came to me; and it yielded under the influence of Fowler's solution of arsenic and compound tincture of cinchona. She was, however, subject to irregularity of menstruation, following an abortion two years before. Catamenia at times very profuse.

Her appetite continued good, and there had been no marked change in weight. In February last she was working very hard, and thinks she spat a little blood mixed with saliva from her throat, and it may have come from her pharynx; she had no cough, and no evidence of disease of the lungs. This was just prior to menstruation; she had taken four grains of quinine the night before the blood appeared. The loss of blood continued only for a single day.

March 7.—I was called to see her. She recommenced spitting blood on the 5th; her menses had appeared the day previous, and the flow was profuse. On the same evening, March 4, she took four grains of quinine, and slept well, but was awakened in the morning by the blood, which oozed constantly from her mouth. Upon examination of her mouth, it was noticed that blood was issuing steadily from the gum at the point of attachment with all the teeth, except the upper central incisors. The gums were not swollen nor spongy; the breath had the odor of fresh blood, but otherwise was not malodorous. There were eight or ten large and small, very dark colored, raspberry-like, elevated patches seen upon the inner surface of the lips and cheeks, and one or two upon the tongue. It was at first thought that blood was oozing from these spots, but it was found that this was a mistake: the blood only came from the sockets of the teeth, as before stated. There was no epistaxis and no pulmonary symptoms. Upon the surface of the body were seen the characteristic lesions of purpura. On the external aspect of the left wrist there was a livid spot the size of a silver dollar; similar spots were present on the lower

extremities below the knees and upon the left thigh. A few petechiæ were seen also on the extremities. The lesions in the mouth gave a little pain, but not those upon the body, which were discovered only by accident. The expectorated blood and saliva showed no tendency towards coagulation; in the course of the day it amounted to about forty to fifty ounces. She complained of severe headache; pulse weak, temperature 100°. Some splenic pain, with moderate increase of dulness. During the next five days the bleeding diminished greatly, and then ceased. Menstruation continued four days, rather profusely, and then declined, until it stopped entirely at the end of a week. There had been no hemorrhage from bowels or kidneys, so far as could be ascertained. The spots upon the skin gradually faded; new ones appearing on the day after I saw her, but none since that time.

May 16.—I was again called to see her, when the same clinical picture was presented as during last attack, except that there was no menorrhagia, the menses having appeared and passed through a normal course two weeks before. In the interim of two months she had felt well, but had applied herself very closely to her work. Upon May 15, feeling worn out, and having suffered with headache for nearly a week, she took two pills of quinine (quinine sulphate, gr. ij each) in the middle of the day, and repeated the dose about five o'clock P.M., as she felt chilly. About seven o'clock, two hours after taking the second dose of quinine, her chill having been succeeded by reaction and moist skin, she commenced to spit blood, and the bleeding soon became as profuse as in the former attack. This time the central incisors did not escape.

May 17.—She has been unable to sleep for two nights, because of the constant oozing of blood,—nearly a quart of fluid having been discharged during the night. Two or three raspberry spots were seen on the lips and tongue, and a livid spot over the outer and upper border of the gastrocnemius muscle. On the following (third) day the bleeding finally stopped; she had no headache, but was very weak. Towards the latter part of the flow the fluid formed a very delicate, cherry-colored coagulum. Microscopic examination of this fluid showed an almost entire absence of healthy red corpuscles, but many deformed ones were seen, mixed with what was supposed to be detritus of cells which had yielded their hæmoglobin to the serum.

Not to go into long details as to treatment, I would say that my therapeutic observations upon this case were briefly as follows:

1st. Fluid extract of ergot had no apparent effect upon the bleeding.

2d. Nitrate of iron solution (U.S. Ph.), given ten drops every hour, for two days, during the first attack, exerted very slight, if any, styptic action.

3d. The application of a four-per-cent. solution of cocaine hydrochlorate to the bleeding surface, as first practised by Dr. William F. Waugh,* of Philadelphia, seemed, after the third trial, to reduce materially the flow of blood. It was applied by means of a small camel's-hair brush, which carried the solution under the border of the gums.

4th. The practice of frequent feeding and a strictly milk diet were made necessary by the condition of the patient. (In cases of hemorrhage I usually order the milk to be boiled with ten or twelve sticks of cinnamon in it. I do not know where I first learned of this expedient, but I can state that I have frequently seen its usefulness, in cases of menorrhagia especially.)

5th. I would, however, call especial attention to the use of the fluid extract of hamamelis Virginica, which, in doses of ℥ss to ℥j, was well borne by the patient, and which in the last attack evidently was of service in shortening its duration. There was no symptom of rheumatism, and none of the usual rheumatic remedies were used.

One remark I would like to make upon the etiology of this disease, as illustrated by these cases. In each of the three attacks occurring in the last patient there was one constant antecedent: *the bleeding followed the administration of quinine.* In the first case, also, it has not escaped your observation that the patient was taking Niemeyer's pills. It is a remarkable coincidence that in the severe case reported by Dr. Waugh, which I have just referred to, the attack also followed the administration of six grains of quinine.

Referring to the literature of the subject, we find that quinine is named among the drugs which are capable of causing purpura.†

Lewin, in his book on the "Incidental Effects of Drugs" (Philadelphia, 1882), also mentions purpura as one of the occasional results of the toxic effect of quinine.

Vepan (*Gazette Méd. de Strasbourg*, 1865) has observed a petechial form of purpura after the administration of gr. ij–iij of quinine in a case of neuralgia.

* Philadelphia Medical Times, vol. xv. p. 380.

† See article on Purpura in Christopher Heath's "Dictionary of Surgery," Philadelphia, 1886.

Gauchet also reports similar cases in the *Bulletin de Thérapeutique*, vol. xc. p. 373.

Grissac (*Des Eruptions Quiniques*) recognizes the following varieties of quinine eruptions: (1) purpura, (2) roseola, (3) scarlatiniform erythema, and (4) eczema.

In this connection the following experiment may prove interesting:

Munk (*Archiv für Anatomie u. Physiologie*, 1873, H. 5) relates that when he allowed a current of electricity, produced by ten of Grove's cells, to pass through a part of the human body after the electrodes had been moistened with a solution of sulphate of quinine, the portions of skin acted upon became anæmic, dried, and depressed immediately after the interruption of the current. Then the next hour the same parts became much swollen, so that they projected considerably above the surrounding skin, without having undergone any change in color. The swelling disappeared during the course of several hours, and gave place to a hyperæmia, in which there appeared a large number of extravasations of blood no larger than the head of a pin, which remained after the hyperæmia had subsided. Quinine could still be found in the urine twelve hours after the passage of the current. In these cases, therefore, in consequence of the passage of quinine through the tissues, an erythema and later a purpura-like eruption was produced.

I think that under certain circumstances we must admit that quinine in ordinary medicinal doses may precipitate an attack of purpura in its severest form. It is understood, of course, that this conjunction is of comparatively rare occurrence, otherwise there would be an epidemic of purpura all over the United States as a result of the large daily consumption of quinine.

Have we any light upon the question? Is there any rule governing these exceptional cases that we can discover? We know that quinine is a protoplasm poison, and therefore may, and undoubtedly does, exert its influence upon the capillary vessels, thus obstructing normal diapedesis. It also reduces the vital activity of the white blood-cells, and checks their amœboid movements. But, ordinarily, this does not lead either to extravasations or to hemorrhage. What, then, is the condition of the circulating fluid which furnishes the reverse of the medallion? It has been noticed that the patients have usually been overworked and exhausted and have complained of chilliness, which may perhaps have been due to spanæmia or poverty of the blood. Without discussing the problem further, let me say that, in connection with the evident degradation of the blood and its feeble coagulating power noticed in the above cases, some recent experiments upon the coagulating principle of the blood are suggestive and may be important. The experiments were reported by Drs. Wooldridge and Lingard in lectures recently delivered before the University of London. Dr. Wooldridge is demonstrator of physiology at Guy's Hospital. He claims that by the use of low temperatures he succeeded in isolating from the blood-serum a substance which, when injected into the circulating system of another animal, produces almost instantaneous general clotting of the blood. It was suggested that the normal coagulability of the blood is due to the presence of this body in a certain proportion; that it may be increased or decreased by diet as well as by disease. It was—and this is to be noted in connection with our cases—very much reduced by starvation, and it could be increased by a diet containing much fat.* The value, therefore, of a diet of milk or cream, liberally administered, may be not inferior to that of drugs in the treatment of diseases attended by reduction in the coagulating principle of the blood, which apparently is so important a factor in cases of purpura hæmorrhagica. Diseases are often like the dissected puzzles of children, made up of several co-operating causes varying in importance and in their nature, but all of which are required to complete the clinical picture. In citing quinine, therefore, as a factor in the causation of certain cases of purpura, I do so without prejudice against its use in appropriate conditions, and without ignoring the fact that there may also be present an abnormal condition of the blood, concerning the precise nature of which we are still in the dark.

Upon the subject of etiology I observe, in conclusion, that Dr. Wilkes† had a case under his care in which Mr. Watson Cheyne found strings of micrococci in the tissues. In a case of Dr. Russell's he had previously found bacteria.

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* See *ante*, London Letter, June 14, 1886.

† Fagge's "Practice of Medicine," Am. ed., vol. ii. p. 624.

NOTES ON SOME FORGOTTEN OR MUCH-NEGLECTED REMEDIES AND THERAPEUTIC MEASURES.

BY CALEB GREEN, M.D.,

Homer, New York.

THOSE who have lived through many years of the history of medicine and have observed the progress and oscillations of therapeutic ideas and practices have become familiar with the tendency of medical men to run to extremes in pursuing some new measure or in making a hobby of some new remedy, until, finding that the remedy or measure would not do all that unreasoning enthusiasm had promised, they have come to neglect or set it aside for something new,—something having similar therapeutic results, but promising to act more in accordance with the old saw, "*Tuto, cito et jucunde.*"

Those who have been observant for the last thirty or forty years of the changes alluded to have seen many remedies, therapeutical ideas, and pathological theories rise higher than they ever ought to have risen, and, on the other hand, have seen them fall lower than they deserved to fall. The tendency has been, and still is, to an extreme sweep of the pendulum.

Those who practised our art forty or forty-five years ago will remember the beginning of the decline of the great and overshadowing therapeutic agent, *bloodletting*. Previous to that period no acute inflammation or congestion escaped the lancet or scarificator or leech. If a young practitioner was so unfortunate as to lose a case of pneumonia or peritonitis in which he had not bled his patient profusely and repeatedly, he was in danger of being accused by his medical fathers and nursing mothers of allowing his patient to die. The young doctor was set down as timid and inefficient: he was not to be trusted. The wise and designing Sangrados could "sit down on him" in cool assurance that they would be sustained by the laity; for, notwithstanding the rising prejudice against the excessive use of the lancet and other powerful agents, the rank and file of the people still blindly worshipped the "bold practitioner," while the cautious young physician was often looked upon as a skulker.

As time wore on, however, a better system of clinical study began to prevail; empiricism gave place to a more thoughtful method of observation, which resulted first in the diminution of the amount of blood lost by patients, and finally in the number of cases in which it was thought that bloodletting was required in any measure. The laity also began to have opinions. Slowly the fashion began to gain ground of rejecting the lancet except in extreme cases, until at last venesection, instead of being the rule, became between 1850 and 1860 the rare exception. This change, however, did not in that period become alike complete in all localities.

In the period between 1840 and 1850 two forms of empiricism which had existed for several years began to rear their heads and even to assert themselves. I refer to the Botanic or Thomsonian "system," so called, but which now has acquired or assumed the sounding name of "Eclectic," in which all sorts of good things are accepted and all sorts of bad things rejected,—in which fierce lobelia, emetics, and huge draughts of bitter or aromatic infusions and decoctions figured as the health-giving agents. The other and extreme and more attractive form of charlatanism was distinguished by its therapeutic dictum of *similia similibus*, etc., and its infinitesimal dosage. These agencies, with the waning faith of both doctors and people in the former rough plans of medication, made unfashionable the former leading remedies and therapeutic measures,—bloodletting, mercurials, antimony, and counter-irritants. Cathartics never lost their hold on the people,—as witness the triumphs of Brandreth and Ayer.

The unpopularity of the lancet in pneumonia—croupous pneumonia—arose from its outrageous abuse in former times. Its use and usefulness as an adjuvant of other antiphlogistic means in the early stages of this disease have been forgotten or overlooked by those who were in practice thirty-five years ago. If they will recall the prompt relief which they witnessed from an effective but judicious bloodletting, supplemented by the proper administration of antimony, they will wonder how they ever came to wholly abandon the treatment. The substitution of veratrum viride for antimony, much as it is decried on theoretical grounds (after the overburdened heart has been relieved by the abstraction of a portion of the circulating

fluid), is a decided advance in the therapeusis of pneumonia. But, like the lancet and tartarized antimony, it is a powerful remedy and is to be used with judgment, and when so used will help to limit the inflamed area as well as its duration, notwithstanding the fact that pneumonia in a certain but very limited proportion of cases suddenly subsides by crisis on the seventh or eighth day. That we do cut short—or, as the French say, *jugulate*—pneumonia in a fair proportion of cases under the plan above indicated is a clinical fact too well known to be doubted, especially by those whose reaction from the extreme practice of other days was only moderate.

In a discussion which arose in the American Medical Association a few years ago on venesection in pneumonia, a wide range of views was held. A Cincinnati professor indulged in this inconsequential talk: "What advantage is there," said he, "in checking the force and frequency of the heart, when this increase in force and frequency is only compensatory, and is to be favored rather than checked? Pneumonia is due to a poison entering the blood and affecting the whole body, and no amount of bloodletting could let it out any more than we can drain out the impurities of a stream with a bucket." I say that this is inconclusive talk, and is not worthy of an attempt at refutation. In the same discussion such men as Dr. N. S. Davis, Dr. William Brodie, Dr. A. C. Post, and Dr. S. D. Gross, of Philadelphia, spoke in favor of bloodletting, and regarded it as an adjuvant or auxiliary of great value. Dr. Post, in allusion to the lower percentage of deaths from pneumonia treated by the modern methods, very justly remarked that no reliance could be placed on statistics, as they were chiefly drawn from a class of patients found in hospitals, who had been badly clothed, badly housed, and badly fed all their lives, and such statistics were not reliable guides. And a little reflection will show any one that in such a class of patients the modern expectant plan of management of pneumonia would show a better percentage of recoveries than the spoliative treatment of former times. But with the judicious use of the lancet among the healthy denizens of country villages and a farming population, I venture the opinion that the favorable percentage of recoveries would be recorded on the other side. If a name is treated instead of a condition, we must expect disappointment in the results.

Among modern writers, Dr. Henry Hartshorne, of Philadelphia, took a most sensible view of this whole question. He gave as reasons for the fact that bloodletting has more opponents than defenders now than at any earlier period in medical history: 1st, the reaction from the previously-existing abuse of the remedy; 2d, a change in the average human constitution (in large cities especially) occurring under the artificial habits of civilized life; 3d, false construction and misapplication of recent science (as in the case of the Cincinnati professor); 4th, leadership and fashion. And he might have added a fear on the part of the practitioner of the prejudices of the community and of becoming unpopular if he should bleed and blister, notwithstanding the soundness of his convictions as to the value or necessity of these measures.

By the timely and suitable letting of blood we lessen, for a time at least, the fulness of the blood-vessels, the number of the red corpuscles, the force of the heart's impulse and of the arterial impulse, and the excitement of the nerve-centres. "By all these influences," Dr. Hartshorne remarks, "we diminish the vascular excitement connected with an inflammation, and thus lessen the amount of the resultant exudation, and render its history more normal and its changes less degenerative and destructive."

I need only refer again to the comparative percentage of deaths under the old plan of indiscriminate bleeding in the treatment of inflammations, especially of pneumonia, as compared even with the expectant plan, to show you that, if we study the figures alone and not the facts which generate or make the figures, we may still harbor the delusion that "figures don't lie;" but, if we honestly compare facts *and* figures, we shall see how unreliable are some statistical tables, and how wofully figures *do* sometimes *lie*.

I have alluded to tartarized antimony as one of the agents resorted to in the treatment of inflammations, and especially pneumonia. Before the introduction of veratrum viride, which began to be more especially noticed by Dr. Norwood, of South Carolina, about thirty-five years ago, although mentioned by Bigelow, Tully, and others twenty years earlier, antimony was the sedative generally relied

on; but, after a timid probation of a few years, veratrum viride acquired very generally the confidence of the profession, and tartarized antimony was forgotten. That antimony was nearly as often abused as the lancet is a fact recognized by those familiar with its literature or who thirty or forty years ago were obliged to rely on it as a sedative,—the synergist or adjuvant of bloodletting. But the abuse of such a potent and reliable antiphlogistic was not a sound reason for its neglect or rejection. It is true that it is still used in combination and as an emetic in croup; but its valuable properties in the various forms of pulmonary inflammation are not often recognized, or are forgotten. In some conditions it cannot take the place of veratrum, and yet it is spoken of by some recent writers as "the most powerful antiphlogistic (arterial sedative) medicine." This is high praise, but a little excessive; for, by all odds, it is greatly excelled by veratrum viride as a cardiac sedative.

It seems not to be very generally known that tartar emetic is one of our most efficient agents in promoting parturition. When the pulse is tense, the os rigid, the skin dry and hot, the advance of the head slow, I have seen, by the use of small doses of antimony, the most prompt and happy change for the better. The pulse softens, the skin becomes moist, the rigid os relaxes, the vagina becomes bathed in a plentiful supply of mucus, and the uterine contractions hasten on to a speedy termination of the labor.

It is not a substitute for ergot, but it has properties which make it much oftener available as a means of hastening labor to a happy termination. If the dose can be so graduated as to produce its effect as a parturient just short of nausea, and especially short of vomiting, the effect seems to be better than where vomiting occurs.

In this connection I may allude to the very general neglect or abandonment of emetics, except as simple evacuants of the stomach and air-passages. Thirty or forty years ago, one class of irregular practitioners were notorious for their frequent and empirical use of lobelia emetics, which they generally administered in person, in order, perhaps, to be in readiness to counteract the drastic violence of this agent should mischief threaten or occur, as it frequently did. This abuse of emetics, as well as the increasing prejudice against strikingly potent measures of all sorts, probably had its influence in inducing physicians to restrict emetics to their use as evacuants simply. But emetics for the purpose of evacuating the bile-ducts and stimulating a torpid liver to a more healthy performance of its functions, and at the same time exerting an "alterative" effect on the glands of the stomach and intestines, are not as often resorted to as formerly. They often relieve in a most evident manner that condition which, for want of a better name (and we scarcely need a better one), we call *biliousness*. But the physician who will, even "semi-occasionally," resort to emetics with all proper precautions is in danger of being branded a "fogy." Yet, with the proper restrictions and precautions, we know that they are powerful for good. Shall we be brave enough to use them?

Fashion in medicine is shown in a marked degree in the change of professional opinion, or rather of practice, in the use of blisters in chest-affections. Rubefacients and poultices are relied on when active vesication should be resorted to, especially if there is pleuritic pain indicating a simple pleurisy or one complicating pneumonia. Of course, the other depleting and sedative measures should accompany or precede the blister. It is a powerful adjuvant to other antiphlogistic measures, even when resorted to early in many cases of pneumonic inflammation, and, as I intimated before, where pleuritis is an early and marked complication. I am fully aware that this is not the doctrine or the practice of the profession at the present time, and that I shall be criticised for holding this view. If rubefacients will contribute to the reduction of pain, vesicants will more surely reduce the pleuritic inflammation, and thus help to arrest and limit the amount of pulmonic engorgement, and not add to it, as we are taught to believe. One distinguished writer on the practice of medicine objects to the early use of blisters in pneumonia, in part because it interferes with the physical exploration of the chest, rendering it difficult to follow the progress of the exudation,—as though the object of the blister was not, with the other remedial measures, to help to arrest and limit that exudation.

In pleuritis I am positive that we withhold one of the most potent measures for

its arrest and reduction if we do not at once resort to liberal vesication.

Even in the progress of tubercular phthisis I believe that we may protract the lives of some patients and add to their comfort by attacking the local pleurisies that occur from time to time in the progress of the case by small blisters, thus arresting the inflammatory condition beneath and preventing the early softening and breaking down of tubercular deposits at the seat of pain. I am sure that in several instances I have thus postponed the inevitable, and that without debilitating the patient.

I hope that in all that I have said (and much more in the same line might with profit be said) no one will infer that I do not appreciate the many valuable recent additions to our materia medica and to our therapeutic measures. My object has been rather to call attention to the partly-forgotten remedies and measures which are still worthy of our notice and regard, and also to call attention to the tendency to push new remedies to extremes, and then, if they fail to accomplish all that they at first promised, to abandon them, so to speak, as fossils of a former art buried deeply under the succeeding accumulations, which must also await their turn for historic extinction unless a better medical philosophy shall assert itself. Hold fast that which is good.

I am aware that the tendency of advanced life is to conservatism; but then there need be no bigotry if the individual has continued to cultivate his art and its literature during his accumulation of years. He will, however, be better able to point out that which is of permanent value in former views and practices, but which in the rush of new discoveries and inventions is liable to be forgotten or neglected.

REPORT ON TOXICOLOGY AND STATE MEDICINE.

BY GEORGE H. ROHÉ, M.D.

I.—TOXICOLOGY.

LEUCOMAINES AND PTOMAINES, AND THEIR RELATIONS TO DISEASE.

IN the Paris correspondence in this journal for April 3 is given a very succinct account of the recent discussion before the Academy of Medicine *in re* the discoveries of Professor Gautier. Referring readers to that article (p. 502), and to Dr. Greene's remarks on Dr. V. C. Vaughan's important discovery of a ptomaine in poisonous cheese (p. 781), attention is here directed to more recent investigations upon the last-mentioned substance.

A little over a year ago Professor V. C. Vaughan, of the University of Michigan, discovered a poisonous ptomaine in cheese which had produced alarming symptoms in persons who had eaten of it. This poisonous principle, isolated by a complicated chemical process, was found to produce symptoms similar to those produced by the poisonous cheese itself. The most prominent of these symptoms were dryness and constriction of the fauces, nausea, retching, vomiting, and purging, and in some cases grave nervous depression. The vomited matter was frothy, and the stools were watery in character.

During last winter and spring, Dr. Vaughan, in continuing his researches, succeeded in isolating a similar poisonous ptomaine from pure milk which had been kept in clean, glass-stoppered bottles for three or more months.

On the 9th of last June eighteen persons were poisoned by eating vanilla ice-cream at a picnic in Michigan. Some of the cream, together with a sample of the flavoring-extract, was forwarded to Dr. Vaughan for analysis. After proving the innocuousness of the flavoring-extract upon himself and his assistant (the latter took two teaspoonfuls of the extract without producing any effect), the cream was tested for poison, and the same ptomaine found which had previously been isolated from poisonous cheese and the milk above mentioned. Experiments upon animals (cats) produced the same symptoms as the ptomaine from poisonous cheese. Dr. Vaughan has therefore concluded that the poisonous principles found in the cheese, milk, and ice-cream are identical. He has named this ptomaine *tyrotoxicon.*

Post-mortem examination of the poisoned animals showed entire absence of any trace of inflammation in the intestinal canal.

The physician, Dr. R. C. Moffitt, who attended most of the people poisoned by the cream, and who was himself one of the unfortunate sufferers, describes the symptoms as follows: "About two hours after eating the cream every one was taken with

severe vomiting, and after from one to six hours later with purging. The vomit was of a soapy character, and the stools watery and frothy. There was some griping of the stomach and abdomen, with severe occipital headache, excruciating backache, and 'bone' pains all over, especially marked in the extremities. The vomiting lasted from two to three hours, then gradually subsided, and everybody felt stretchy and yawned in spite of all resistance. The throats of all were œdematous. One or two were stupefied; the others were cold and experienced some muscular spasms. A numb feeling, with dizziness and momentary loss of consciousness, was complained of by some. Temperature was normal, and pulse from 90 to 120; tongue dry and chapped. All were thirsty after the vomiting subsided, and called for cold water, which was allowed in small quantities, with no bad results. . . . All are affected with an irresistible desire to sleep which can scarcely be overcome."

Dr. Vaughan is of the opinion that the production of the ptomaine is due directly or indirectly to the growth of some micro-organism. The fact that the ptomaine was only found when there were evidences of the presence of butyric acid seems to point to some connection between the poison and the butyric fermentation.

Dr. Vaughan varied his experiments by adding small portions of the poisonous cream to fresh custard, and produced identically the same symptoms upon himself as those so graphically related by Dr. Moffitt, after taking only one tablespoonful. The effects upon the throat and mouth resembled those from a toxic dose of atropine. While there was nothing peculiar in the taste of the custard when swallowed, the matter vomited had a sickening odor and taste, recognized by Dr. Vaughan as that of the isolated poison. This would intensify the nausea.

Dr. Vaughan draws pointed attention to the similarity between the symptoms of tyrotoxicon poisoning and cholera infantum. He says, "The disease occurs at a time when decomposition of milk takes place most readily; it occurs at places where absolutely fresh milk often cannot be obtained; it is most prevalent among classes of people whose surroundings are most favorable to fermentative changes; it is most certainly fatal at an age when there is the greatest dependence upon milk as a food, and when, on account of the rapid development of the intestinal follicles, there is the greatest susceptibility to the action of an irritant poison. . . . A little dried milk formed along the seam of a tin pail, or a rubber nipple, tube, or nursing-bottle not thoroughly cleansed, may be the means of generating in a large quantity of milk enough of the poison to render it highly harmful to children. . . . If this causal relation does exist between tyrotoxicon and cholera infantum, a knowledge of it will aid us not only in the preventive but in the curative treatment of the disease. The first thing to do in the treatment of the disease is to absolutely prohibit the further administration of milk, either good or bad, because the fermentation going on in the intestine would simply be fed by the giving of more milk, even if that milk be of unquestionable purity."

The successful use of mild antacids (chalk-mixture), disinfectants, opium, and stimulants, which all enter into the treatment of the disease as practised by the majority of practitioners, would be entirely consistent with the theory of its causation by tyrotoxicon.

CHRONIC TEA-POISONING.

Dr. William N. Bullard (*Boston Medical and Surgical Journal*, March, 1886) has made an elaborate clinical research on the effects of the habitual use of an excessive quantity of tea. His observations were made upon one hundred and sixty-three cases of tea-drinkers, and he classifies the symptoms of chronic tea-intoxication as follows. Loss of appetite was present in sixty-one per cent. of the cases, dyspepsia and epigastric pain in fifty-two per cent., palpitation of the heart in forty-nine per cent., constipation in forty-seven per cent., nervousness in forty-two per cent., headache in thirty per cent., pain in the left side in twenty-one per cent., nausea in twenty per cent., and vomiting in seventeen per cent. While of course there is nothing characteristic of tea-poisoning in any one of these symptoms, the combination, especially the predominance of the nervous group, assists in the diagnosis. The digestive disturbances are usually the beginning symptoms showing the toxic action of the tea; the nervous symptoms appear next; and in many cases a diagnosis is

readily made from the mere appearance of the patient.

The average quantity of tea taken by the individuals who suffered from the toxic effects of the beverage was four and eight-tenths cups per day. It was found, however, that anæmic persons suffered from smaller doses and to a more intense degree than those who are robust. Sedentary persons also suffered more severely than those leading an active life.

A case of acute tea poisoning, with symptoms resembling delirium tremens, is related by Dr. Slayter, of Halifax (*Lancet*, April 24, 1886).

The patient stated that at the age of seventeen she went to work in a factory in one of the New England towns, where she contracted the habit of chewing tea. She had never been addicted to the use of alcohol. The symptoms of the attack were as follows. She complained of sleeplessness, nervousness, and repeated twitchings of the muscles of the face and extremities, which would continue for several minutes at a time. The girl's mistress stated that she had been acting strangely for several days; she was wandering in her mind at times, and imagined people and evil spirits were about her seeking to do her harm; she had not slept for several nights, and on one or two occasions had wandered about the house. Pulse 96 and small; tongue dry and brown; eyes suffused; irregular heart-action; sensation of weight at præcordia; sallow complexion. The symptoms were relieved by a dose of bromide of potassium and chloral.

Three days later Dr. Slayter was again called to the patient, who had been found walking about at night near the docks and when discovered tried to jump overboard. When taken home her pulse was 110, dry and brown tongue, suffused eyes, no increased temperature, violent delirium, and tremor of hands and arms. She had complained of pain in the abdomen, and an examination disclosed a smooth, hard tumor in the right iliac region. A cathartic brought away a mass of hardened fæces, followed by a large quantity of thickish, tarry-looking excreta, which seemed to be made up of tea-leaves in different stages of maceration. Bromide of potassium and chloral, followed by tonics and good food, soon restored the patient to health.

POISONING BY BELLADONNA.

Tanner (*British Medical Journal*, March 27, 1886) reports a case of poisoning from swallowing belladonna liniment (quantity not given). When brought to the hospital, about an hour afterwards, the patient's face was flushed, tongue dry, and gait unsteady; pupils partly dilated; breathing shallow, regular, twenty per minute; pulse 98. Vomiting was induced by sulphate of zinc, but without producing improvement; the stomach was also siphoned out.

As the patient became very drowsy, faradism was applied, and the face, chest, and abdomen slapped with a wet towel; the temperature was taken, and found to be 105.6°; pulse 120.

Pilocarpine hypodermically promptly produced profuse perspiration, followed by temporary improvement in the patient's condition. The temperature continued rising, and reached 108.6° in the axilla just before death, which occurred six hours after the poison was swallowed.

POISONING BY CAMPHOR.

A case of poisoning by camphor is reported in the *Indian Medical Gazette* (*La Thérapeutique Contemp.*, May 28, 1886). A machinist having overstayed his leave was advised by a friend to make himself sick in order to have an excuse for his absence. He swallowed two pieces of camphor of about the size of a nutmeg. He soon experienced a sensation of extreme heat in the stomach, followed by vertigo, dizziness, and general malaise. Afterwards there was great agitation, injection of the conjunctivæ, and trembling of the lips. On attempting to walk he fell to the ground, and about an hour after the poison was taken he had a convulsive attack. The spasms, which were at first tonic, became clonic. He frothed at the mouth, the eyeballs were rolled upward, the lips were separated, and the face pale and bluish. After an hour there was a second attack. Between the two attacks the patient complained of an intense sensation of burning in the œsophagus and stomach, and an ardent heat throughout his whole body, with a sensation of general discomfort and complete impossibility of controlling his muscular movements. He vomited several times, but neither micturated nor defecated. The skin did not present any sensible alteration of temperature. Strong coffee and small doses of belladonna repeated every half-hour produced amelioration of the symptoms in about two hours, but a

sensation of discomfort and feebleness and a tendency to sleep persisted for some time. Probably the vomiting relieved the patient of the greater portion of the poison.

ARE COPPER SALTS POISONOUS?

Dr. Du Moulin, Professor of Toxicology in the University of Ghent, opened an interesting discussion in the Academy of Medicine of Belgium by the question, "Are the salts of copper poisonous?" He related a number of experiments made upon animals to determine the question. He had given rabbits and dogs doses of a drachm to a drachm and a half (four to six grammes) of sulphate of copper without producing a single case of grave poisoning. The subacetate administered to dogs produced at first vomiting, but could then be given daily without producing vomiting for periods varying from six weeks to a year.

Similar negative results were obtained with carbonate, oxide, and oleo-palmitate of copper.

Dr. Du Moulin had also given copper salts medicinally to human beings. As much as half an ounce (seventeen grammes) per day had been given without producing discomfort. To scrofulous children an average of thirty-seven and a half grains (two and a half grammes) (per day?) had been administered.

The experimental and therapeutic results obtained by Dr. Du Moulin justified the assertion that the salts of copper are not poisonous. He also formulates the following conclusions:

"It is not demonstrated that large doses of copper compounds mixed with food have ever produced death.

"Except possibly in case of suicide, acute poisoning with copper compounds is not conceivable, on account of their horrible taste and prompt emetic action.

"The quantity of copper necessary to give a green color to legumes (canned peas and beans) is absolutely innocent. There are no facts more solidly established in medicine than their perfect innocuousness.

"All laws which prohibit the employment of vessels or salts of copper in the preparation of conserves or preserved provisions should be abolished."

Naturally, such radical views provoked considerable opposition, and among the opponents of the conclusions above quoted were Drs. Belval, Depaire, Lefebvre, Crocq, and Vleminckx. But none of them were able to offer anything other than opinions, either of their own or of others, upon the question. The experiments of Dr. Du Moulin, unless errors of observation have crept in, seem to confirm the position he has assumed. The experiments of Galippe have also shown that the fears of poisoning from food cooked in clean copper vessels are groundless. They would also indicate that no fears of poisoning need be entertained from eating canned peas and beans or pickles colored with copper, inasmuch as the quantity of the cupric compound that can be employed without destroying the palatability of the articles is too insignificant to produce any symptoms whatever.

This view is also supported by such high scientific authorities as Pasteur, Brouardel, and De Pietra Santa.

POISONING BY CHLORATE OF POTASH.

Professor von Maschka (*Wiener Med. Presse*, No. 15, 1886) reports the case of a man who had taken four drachms of chlorate of potash, dissolved in water, in the course of six hours. The symptoms were pain in the abdomen, diarrhœa, perspiration, weakness, great thirst, and tonic contractions of the upper extremities. The man died unconscious eleven hours after taking the first dose of the drug.

The medicine had been prescribed as a gargle by the physician, whose directions it appears, however, were not explicit enough, and the patient took it internally, with the result above stated.

The post-mortem appearances were a grayish discoloration of the integument, and a dirty-grayish color of all the tissues, including the bones. Professor von Maschka calls attention to this discoloration as characteristic of chlorate-of-potash poisoning.

CARBOLIC-ACID POISONING.

Dr. A. Caillé (*Neu Yorker Medizinische Presse*, March, 1886) reports five cases of acute carbolic-acid poisoning. The cases were:

A child of 2½ years, who had taken nearly half an ounce of concentrated carbolic acid; died, seven hours after, with symptoms of pulmonary œdema.

Child of 3 years; six drachms of concentrated acid; death.

Woman, aged 30; tablespoonful of concentrated acid; recovery.

Man; tablespoonful of concentrated acid; recovery.

Man, aged 35; tablespoonful of concentrated acid; death almost instantaneously.

The treatment, except in the last case, was chalk-mixture, milk, olive oil, siphonage of the stomach, and apomorphine hypodermically to produce emesis. Emetics *per orem* failed to produce vomiting, but the apomorphine was promptly effectual. In the cases which recovered, no stricture of the œsophagus remained.

Dr. Caillé also cites seven cases from the literature, all of which recovered. The amounts varied from a half-teaspoonful to four ounces of strong acid.

The principal symptoms of carbolic-acid poisoning are coma and anæsthesia, cold perspiration, muscular spasms; rarely vomiting; white patches in the mouth; urine grayish green, sometimes containing albumen; subnormal temperature.

Apomorphine subcutaneously and solutions of sulphate of soda and chalk-mixture internally are recommended as antidotes.

If the patient is comatose, siphonage of the stomach should also be employed. The after-treatment is that of acute gastritis.

In New York City thirty-nine deaths from the accidental swallowing of the drug, and eight deaths where the acid was taken with suicidal intent, have been recorded in the last ten years.

DRINKING-WATER AS A SOURCE OF LEAD-POISONING.

According to an interesting report by Dr. Sinclair White (*Lancet*, March, 1886), the city of Sheffield, England, is supplied with drinking-water from two distinct sources, with separate systems of distribution. A number of cases of lead-poisoning having occurred last year among persons not engaged in any occupation in which lead is used, suspicion attached to the water-supply. It was found upon examination that the supply in some parts of the city contained lead, while in other parts it was free from the poison. Further investigation showed that the water from one source of supply was impregnated with free acid, probably derived in its passage through peat and rock containing iron pyrites. This water contained lead from the supply-pipe, while the water from the other source of supply, which was not acid in reaction, did not contain lead in appreciable quantities. It was also found that the water passing through new lead pipe was more strongly impregnated with lead than that passing through old pipe. The greater length of time the water had stood in the pipes also influenced the proportion of lead present. It was found that carbon and spongy-iron filters removed all traces of lead from the water.

CURIOUS SOURCE OF LEAD-POISONING.

A case is recorded in a German medical journal in which an infant was poisoned by the lead contained in a cosmetic on the face of the nurse. The child was five weeks old, and was constantly crying and suffering with colic. Its skin was of a dull bluish tint. The nurse had long been in the habit of using a cosmetic which contained a large proportion of lead. It is stated that upon removal of the cause and appropriate treatment a cure was effected in a few days.

(To be continued.)

ERGOT IN LABOR.

BY J. W. MACFARLANE, M.D.,
Physician to the Episcopal Home, Pittsburg, Pennsylvania.

WE notice in a number of journals of late that ergot is given a prominent place in the management of labor, some recommending it in the second stage, whilst others believe it to be indispensable to the proper management of the third. This journal of September 4 contains an article by Dr. Reichard endorsing it unequivocally in the third stage.

That ergot is a remedial agent of great virtue there is no question; that it should be given in every case of labor seems not only irrational, but harmful.

Labor is a physiological process, and where nature is capable of performing its functions properly it seems meddlesome, to say the least, for the *accoucheur* to give a dose of ergot when the after-birth is expelled and the uterus firmly contracted, under the impression that it will ward off septic trouble and what not.

It is questionable whether ergot should be given in the second stage of labor. One is probably debating whether to apply the forceps or not, and, to get out of the

dilemma, or to be doing something, gives ergot. When I was a resident physician, hour-glass contractions of the uterus and retained placenta were not uncommon things under the use of ergot, and the consequent manipulation to remove the afterbirth (which several times necessitated the introduction of the hand) left the patients nervous, exhausted, and liable to hemorrhage.

When there is any difficulty in the third stage of labor, we use the Credé and Cazeaux methods combined. If there is a disposition for the uterus to relax after the removal of the after-birth, the patient is placed upon her back, and the fundus of the uterus is grasped with one hand, whilst two fingers of the other hand are introduced into the vagina. Under these circumstances the neck of the uterus is generally filled with a large clot. A little manipulation with the external hand and fingers within the vagina brings on firm contractions of the uterus, and the clots are forced out into the palmar surface of the hand and thence into the bed.

In cases of post-partum hemorrhage we empty the cavity of the uterus that we may secure perfect contraction. Why not invite a relaxed uterus to contraction in the same manner, when we have the means so ready at our command?

We have never seen the above-named procedure fail to procure firm contraction, though we have, in certain cases where the patients were feeble, followed it up with ergot to guard against any possible danger.

Lying-in women generally get along without a bad symptom. Why make them sick by the use of ergot?

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NOTES OF HOSPITAL PRACTICE.

HOSPITAL OF COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE.

CLINICAL SERVICE OF OSCAR J. COSKERY, M.D.,

Professor of Surgery, College of Physicians and Surgeons, Baltimore, Maryland.

A FOREIGN BODY (JACK-STONE) IN THE AIR-PASSAGES FOR TWENTY-THREE DAYS.

SARAH A. W., aged 4 years and 8 months, while playing with an iron "jack-stone," put it in her mouth, and soon after was found to be suffering with difficulty in breathing. The mother, recognizing the probable cause, put her finger into the child's throat and thought she felt the foreign body, but was unable to extract it. A physician in the neighborhood saw the child within half an hour after the accident occurred, and, while the child was under chloroform, attempted to remove the "jack" with such instruments as he had at hand. Being unsuccessful, the child was sent to me on the next day, August 3, 1886.

Owing to the absence of symptoms peculiar to foreign bodies in the larynx or trachea, the statements of the mother, and the size of the "jack," it was thought by my colleagues who were present, as well as by myself, that the gullet was the site of lodgment. Under chloroform, a large flexible copper probe was with some difficulty passed into the stomach. The foreign body was not detected, and was supposed to have passed into the stomach.

Further proceedings were not thought justifiable, and the child was allowed to come from under the anæsthetic, which she had taken badly. The breath-sounds were normal, and there was no stridor. Semi-solid food was ordered, but the child could not swallow without pain. This was referred to the efforts that had been made to extract the "stone."

On the following day the child was seemingly so much improved that she was sent home, the mother being instructed to watch the stools carefully, and to return at once if any symptoms developed. This she did one week afterwards, saying that the child still could not swallow without pain. Bromide of potassium was ordered in two-grain doses every four hours, and the child directed to be brought back in two days if not decidedly better. I was still inclined to the opinion that the foreign body was somewhere in the alimentary canal.

Circumstances prevented the mother from again bringing the child until August 24, when she gave the following account. Up to the 21st the child's breathing had changed very little, but the difficulty in swallowing had continued. On that day it was noticed that every time it took anything in the shape of liquid food an attack of spasmodic cough came on. This cough also came on at other times and robbed the child of sleep. The child was wasting, and complained of pain

on the left side of the throat on a level with the thyroid cartilage. Nothing could be felt externally. From the persistence of the localized pain, and especially from the repeated attacks of spasmodic cough, I was fully convinced that the foreign body was in the air-passage, and, from its size, located in the laryngeal box.

On August 25, under chloroform (which she took very badly), laryngo-tracheotomy was done. There was scarcely any bleeding until the windpipe was opened, and then it became rather profuse for that organ. The "stone" was at once detected, the wound rapidly enlarged upward and downward, and the foreign

body extracted. A few moments afterwards the child stopped breathing. I immediately applied my lips to the wound, sucked out the blood, and breathed into the child's lungs three or four times. This had to be repeated before natural respiration was fully restored. On account of the oozing still going on, the wound was left open, although nearly all the air passed through the mouth. No chloroform was administered after the incision through the skin. With the exception of once, for a short time only, the breathing was good and full for about three-quarters of an hour.

While the child was coming from under the anæsthetic, it sprang up suddenly, called upon its mother, and fell back dead. Artificial respiration, continued for half an hour, was without avail.

On examining the wound after death, the cut in the windpipe was found to be three-quarters of an inch in length, involving the three upper rings of the trachea, the cricoid and the lower two-thirds of the thyroid cartilages. The mucous surface was injected, but no spot of ulceration was seen. The cause of death was supposed to be failure of the heart's action.

The points of greatest interest in this case are the length of time the "jack" remained in the laryngeal box without producing ulceration, and the late appearance of symptoms typical of foreign body in the air-tubes. The latter may have been due to the shape of the "stone."

TRANSLATIONS.

Rhinoscleroma of Mucous Membranes.—Drs. O. Chiari and G. Riehl, of Vienna, have made a study of rhinoscleroma of the mucous surfaces, including thirteen personal observations and twenty-four collated from medical literature, upon which they base certain conclusions and observations as to the character of the disease. Like that of the skin, the affection of the mucous membrane is characterized by a hard infiltration, appearing without prodromata either diffuse or in the form of tubercles and plaques. Rhinoscleroma of the mucous membrane is a disease the progress of which is exceedingly slow, less slow, however, than that of the skin. The tubercles, which may attain the size of a hazel-nut, are either aggregated or isolated. They are as hard as ivory, and very frequently preserve their epithelium intact, but sometimes they present superficial erosions. The mass of the tubercle never softens, but it ends in resorption with the formation of a fibrous cicatrix, with irregular contraction (*ratatinement*) of the neighboring surface. This occurs both in rhinoscleroma diffuse and in plaques.

The posterior portion of the soft palate and the choanæ are most frequently the first parts affected, and from this as a centre it may be propagated in both directions. The affection of the mucous membrane precedes that of the skin in the majority of cases, as Kaposi has already observed. The nasal fossæ may be completely obstructed by the tubercles. The disease may appear independently in the larynx, where it attacks the vocal cords particularly, giving the appearance of chronic inflammation with hypertrophy.

The disease does not appear previous to puberty, and rarely after the fortieth year of age. The disease is not attended, as a rule, with suffering; and the attention of the patient is usually called to it by a feeling of obstruction in the nasal passages. Sometimes there is pain on swallowing food when the tubercles in the pharynx are large. The affection is not of itself fatal, but may induce death by suffocation or by intercurrent erysipelas. It may heal in places, but never disappears entirely. Removal of the growths is followed by rapid return. Tubage of the larynx may be required for the relief of

threatened suffocation. Interstitial injections of arsenic, etc., have been of no avail, and have been followed by local gangrene. The slow march of rhinoscleroma, the hardness of the tubercles, without surrounding inflammation, and the absence of softening, are sufficient to distinguish a case of scleroma from syphilis. The glandular involvement is marked in the latter disorder, in this it is slight; finally, specific treatment is useless in rhinoscleroma. The softness and deep ulceration attending lupus would prevent it from being confounded with the disease under consideration. In conclusion, the authors accept the view that rhinoscleroma is a neoplasm formed by embryonic tissue, and is essentially the same when occurring in the mucous membrane as in the skin.—*Zeitschrift für Heilkunde*, Band vi.; *Revue Mensuelle de Laryngologie, etc.*, No. 4, 1886.

The Development of the Gray Cortical Substance of the Brain.—At a recent meeting of the Académie de Science, M. Vignal presented a note on the development of the gray cortical substance of the cerebral convolutions. The elements of the cortical substance of the brain are, like those of the cord, solely derived from the ectoderm. At the commencement of gestation they resemble the embryonic gray substance of the cord. Since Kölliker's works, it is generally known that the primitive layer rapidly divides into two layers: one inner, an epithelial layer, limiting the fourth ventricle; the second layer forming the gray cortical substance of the brain. Between these two layers appears the white substance proceeding from the outer layer. As soon as the outer layer appears, the cells of the inner layer lose their epithelial character; they present a large nucleus surrounded by a granular protoplasm, from which proceed a number of prolongations lying close together. These non-differentiated cells begin to be differentiated towards the middle of the sixth month. The first nerve-cells that appear are those which form the lower portion of the third Meynert layer (the layer of the big pyramidal cortical corpuscles). In the course of the seventh month the nerve-cells of the fourth layer appear, in the eighth month those of the second and fifth layers. The first Meynert layer consists of fine nerve-tubes. (Exner.) It appears at the sixth week, simultaneously with the white substance. At the ninth month the five Meynert layers can be easily recognized, although the greater proportion of cells differ considerably from those in adults. The neuroglia cells appear at the eighth month. In comparing the development of the gray cerebral substance with that of the gray substance of the cord, M. Vignal dwells on the fact that the cerebral development is not so early as that of the cord. The medullary cells begin to appear at the twelfth week of gestation, the cerebral at the twenty-eighth week.

New Warm Stage for Microscopic Work in Bacteriology.—At a recent meeting of the Paris Biological Society, M. Vignal presented a self-regulating warm stage for use in microscopic work. It is small, easily used, certain in its results, and maintains an unvarying temperature. M. Vignal described this instrument as a modification of D'Arsonval's constant-temperature stove. It consists of a rectangular copper box, with double sides. The space limited by the inner wall constitutes the hot-air chamber. The right side of this chamber is removed in order to be able to place and handle the object-glass, on which is placed the preparation for study. On one side is the regulator, which is D'Arsonval's india-rubber diaphragm. On the upper part of the instrument there are two small tubes; through one of them water is introduced, and in the other a glass tube is fixed, along which the water rises and falls, determining the pressure which acts on the india-rubber diaphragm. A thermometer is passed through a small opening in front of the instrument, and is placed in the chamber containing the preparation. An opening from above downward is made in the stove, which allows the lens to reach the preparation, and also the light to penetrate. In order to prevent draughts, this aperture is closed at the lower extremity by a glass disk. A small sliding door can be brought almost into contact with the preparation in order to prevent loss of heat in the hot-air chamber. In front of the stove there is a cylindrical diverticulum, or side-process, similar to those of funnels for filtering hot fluids. A small gas-jet heats the side-process, and is protected by a small glass cylinder, which not only prevents the gas from being extinguished by draughts, but utilizes the

heat it produces. This instrument has been tested and submitted to different conditions. The temperature of the hot-air chamber has never varied more than one or two tenths of a degree, when the surrounding temperature was suddenly modified by opening a window close to the instrument, or by placing it near a source of heat: in a short time equilibrium was restored.

As this warm stage continues in working order indefinitely, without personal superintendence, it is specially adapted for the microscopic study of artificial cultivations of micro-organisms.

New Facts concerning M. Pasteur's Treatment.—There are one or two new facts concerning M. Pasteur's preventive treatment for hydrophobia which are worth noting. The rabbits inoculated are chloroformed during the operations of trepanation and inoculation, which are effected on aseptic principles as much as possible, the wound being only slightly moistened with carbolic acid; for if it were thoroughly washed out with this acid the virus would be destroyed. The bottles in which the cords are preserved are no longer closed at the lower tube by a tap, but by a piece of cotton wool. M. Pasteur now makes ten inoculations instead of thirteen, as he did in the case of Meister, the first patient treated; the inoculations are made every day: thus there is an interval of twenty-four hours between two consecutive inoculations. The first inoculation is made with a cord which has been kept fifteen days, the second with a fourteen days' cord, and so on. The last inoculation is made with a preparation of a cord only six days old. M. Pasteur inoculates his subjects from cords which have been preserved only five, four, three, two, or one day, in cases where the wounds resulting from the bites are especially dangerous, either on account of the region they occupy, their number, or the depth of tissue injured.

A New Cinchona Preparation.—A conserve of cinchona (saccharolé de quinquina) was presented by M. Ferd. Vigier to the Société de Thérapeutique, as a tonic having especial advantages for administration to children. The preparations of cinchona having a pleasant taste, as shown by Blondeau, Waldman, De Vrij, and others, usually contain only a small quantity of the alkaloids of the bark. In order to avoid this, M. Vigier selected a bark rich in alkaloids (cinchona officinalis et succirubra from Java), and exhausted it completely after the method of De Vrij. This extract, containing all the active principles of the bark, is evaporated, and finally mixed with sugar in such proportion that five grammes (or a teaspoonful) represent a gramme of the extract or five grammes of the powdered cinchona bark. From one to four teaspoonfuls may be given daily, either as a bon-bon, or in a little wine-and-water. A good wine of cinchona may be made by adding the saccharure in any desired proportion to wine. His experience had shown that the preparation possesses the same activity as the bark and forms an acceptable substitute for many of the officinal preparations.—*Bulletin et Mémoires, Société de Thérapeutique.*

Studies on the Structure of Blood-Vessels in the Invertebrates.—In a note read at the Académie de Science by M. Vulpian, M. Vignal stated that he had studied the investing epithelium of the blood-vessels of two kinds of invertebrates, snails (mollusca) and crayfish (crustacea). It was well known that the investing epithelium of blood-vessels in vertebrate animals consists of contiguous polygonal cells, held together by a kind of cement. In the invertebrates the cells had dentated edges fitted into one another. These structural details are made evident by the action of nitrate of silver, demonstrating that the investing epithelium of vessels of invertebrates resembles that of lymphatics in vertebrates. M. Vignal concluded that, contrary to zoological teaching, what are commonly believed to be blood-vessels in invertebrates are really lymphatics, a belief further warranted by the fact that the vessels of the invertebrates open into the connective tissue.

Cremation and the Roman Catholic Church.—By a decree of the Roman Inquisition, dated May 19, 1886, and confirmed by the Pope, Catholics are forbidden to join cremation societies, or to order their own bodies or the bodies of others to be cremated. His Holiness, in confirming the decree, condemns the "detestable abuse of cremating human bodies."

PHILADELPHIA
MEDICAL TIMES.

PHILADELPHIA, SEPTEMBER 18, 1886.

EDITORIAL.

THE CLOSE OF THE VOLUME.

THE sixteenth volume of the *Philadelphia Medical Times* terminates with the present number. The index to the journal for the year just closed will show that the promise to maintain the high standard of previous volumes has been scrupulously kept, notwithstanding the very liberal reduction in the subscription-price to two dollars per annum, made by the publishers.

A larger number of Original Communications of permanent value have appeared in the pages of the *Times* during the past year than ever before; and in the numerous Clinical Lectures and Hospital Notes care has been exercised to give expression to the views of leading clinicians upon subjects of immediate and practical interest. The position taken in these columns with regard to the International Medical Congress—that its success is a question involving the honor of every regular physician in this country, and that those who still oppose it are recreant to their professional obligations—we are glad to see is now supported almost unanimously by the profession. Topics of present interest have been considered in the editorial columns, and leading articles have been furnished upon subjects involving special or exhaustive treatment. Abstracts have been freely made from current literature at home and abroad, and a mirror held up to observe the progress in several departments of medicine in reviews contributed by writers of acknowledged eminence in the specialty of which they treat. Reports of meetings of various medical societies have promptly appeared, the various national organizations being specially reported for these pages. We would take the opportunity of expressing our thanks to our various correspondents for the interesting letters from London, Paris, and Berlin, as well as from the principal American cities, which have added much to the attractions of the *Times*. In the forthcoming volume all these features will be retained, and new ones added if found desirable. In conclusion, we desire to thank our subscribers for their support, and to say that if increased circulation and a subscription-list larger than ever before may be taken as an evidence of appreciation by the profession, the management of the *Times* has substantial and sufficient cause for congratulation and encouragement.

GASTRIC NEUROSES.

ROSENTHAL, in a recent work upon "Gastric Neuroses and Gastric Catarrh," sets forth in a systematic manner the results of his investigations in disorders of the stomach up to the present time. This accomplished observer has long advocated the view that neither the theory of local irritation and inflammation nor the recognition of derangements in the chemistry of digestion—the so-called chemical theory—affords adequate support to any system of diseases of the stomach thus far presented. In fact, the influence of these two theories is seen in the unsatisfactory state of our knowledge of gastric disorders and their treatment at the present time. During the last half-decade the attention of the profession has been increasingly attracted to the *rôle* of the nervous system in visceral pathology, and especially in affections of the stomach. Witness Clifford Allbutt's "Gulstonian Lectures on Visceral Neuroses" in England, and the publications of Rosenthal, Leyden and Leube, Stiller, Ewald, Oser, and others, in Germany.

The present need is closer application of clinical methods to the study of these diseases, more clearly defined characterization of the associated derangements of the nervous system, nicer diagnosis of the different forms, better methods of examination, and especially more systematic and practical application of the facts of the chemistry of digestion in diagnosis and treatment. Much that is fundamental is yet to be discovered. It is not yet known what nerves control the secretions of the stomach, the intestine, the pancreas, or the part played in the functions of those organs by the vagus, the sympathetic or the cardiac plexus; nor do we yet know precisely the course of motor impulses to the stomach or of sensory perceptions from it. How the stomach is influenced by conditions of the cerebral cortex is equally obscure, as are also the origin of the sensation of hunger and the nervous mechanism of vomiting. Nor do we satisfactorily understand through what organs or by what tracks reflex disturbances of the stomach are brought to pass. Nor are these deficiencies in our knowledge to be easily supplied by experimental research. In no branch of physiology is caution in the application of facts acquired by investigations upon animals more imperatively demanded than in studies of the vagus. Even in different animals the distribution of the branches of this nerve is most diverse, and, as Henle and Luschke pointed out, not even in man are the filaments of the vagus always arranged in the same manner in the main trunk, or in their central origin and peripheral distribution.

Pending more accurate physiological data, more exact clinical work is full of the promise of practical advancement. Especially is this the case in the field of therapeutics. It is necessary, however, to look beyond the dyspeptic symptoms,—yea, even beyond the stomach itself,—to the condition of the nervous system, and of the organism at large, in order to treat a very large group—we were about to say the greater number—of gastric cases successfully. Certain it is that the day of the indiscriminate routine employment of pepsin, pancreatin, and the malt extracts is passing away.

NOTES FROM SPECIAL CORRESPONDENTS.

LONDON.

THE meeting of the British Medical Association at Brighton has been a great success: the attendance was large, the papers good, and the hospitalities unbounded. The distance was so short that many London men who would not have attended a more distant meeting ran down for a few days to the busy watering-place which is often called London-super-Mare, and a considerable number of foreign visitors were present, including M. Charcot, Dr. Brown-Séquard, Dr. Billings, Dr. Emmet, Dr. Lusk, and the delegates of the Executive Council of the next International Medical Congress. This deputation, which consisted of Dr. N. S. Davis, of Chicago (President-elect), Dr. Brodie, of Detroit (ex-President of the American Medical Association), Dr. Pancoast, Dr. Wile (Newtown, Connecticut), and Dr. Shoemaker, were introduced by the President to a crowded general meeting, and received a most enthusiastic welcome. Dr. Davis produced a great impression by his candid and elaborate statement of the difficulties and dissensions which had occurred, and the remarks made by Drs. Brodie and Pancoast were also listened to with great attention. At the close of these statements the meeting rose, and three cheers for the profession in America and for the delegates were given with great heartiness. I understand that the executive took every opportunity, by private hospitality, and by affording to the delegates opportunities for taking a prominent part in the proceedings, to do honor to the representatives of the profession in America, and to testify a cordial brotherly feeling for the American Medical Association. It appears very probable not only that Great Britain will send a large contingent to the Congress, but also that many leading men in every department will be present at Washington. The British Medical Association, which has in truth a very democratic constitution, has had to deal, in past time, with serious defections, led by prominent men who were not in sympathy with the policy pursued by the Association in certain matters, in the question of medical reform, for instance, and among those who were present at Brighton the immense majority, including especially the older members of the Associa-

tion, were strongly predisposed in favor of the American Medical Association and the Congress. No public statement was made by Dr. Billings, Dr. Emmet, or Dr. Lusk, who were present at the meeting when the delegates were introduced, so that the other side of the late dispute was not presented, and I am even told that Dr. Billings, who has made himself a great favorite here, expressed himself in conversation as desirous of taking part in the welcome which the American medical profession will doubtless offer to the British and European visitors next year.

The address delivered by the President of the Association, Dr. Withers Moore, most popular of Brightonians, was intended not only for the members, but also for the large public who in the columns of the London *Times* read next morning a long abstract of his remarks. Dealing with a subject of the day, "The Higher Education of Women," it has attracted a good deal of attention in the lay press, and, it may be added, a good deal of criticism. The main text of the address was that women were meant to be not men nor manlike, but mothers of men; that the overpressure which, especially with woman's eager nature, is too often a part of modern higher education, tends to indispose them for maternity, and that many of the best women are thus rendered absolutely and relatively infertile, to the detriment of the general development of the higher qualities of the human race. Dr. Moore fortified himself with quotations from Mr. Herbert Spencer, Dr. Mathews Duncan, Sir Benjamin Brodie, Dr. Ed. H. Clarke, Dr. Emmet, and Professor Loomis, and might also have found an ally in M. Renan, who, in a recent oration, traced his own genius to the silent lives of many generations of the Breton fisher-folk who were his ancestors.

A great deal of interest was felt in the address in Medicine; for the excellence of Dr. Billings's address before the International Medical Congress in 1881 was vividly recalled by all who had heard it. On the present occasion Dr. Billings dealt with the position of the profession in the United States, and the need for systematic international co-operation in studying the problems which disease presents. He expressed the opinion that the proportion of practising physicians in the United States was about one in seven hundred and fifty, and that a fair proportion was one in a thousand. This proportion, which is about that which exists in England, is double or treble what was regarded as fair a few years ago, when it was thought that one practitioner ought to be able to attend to the medical needs of between two and three thousand persons. Dr. Billings admitted, therefore, that one complaint made by the profession in the States, namely, that there are too many doctors, is well grounded, and did not dispute that the standard of some of the eighty colleges was too low. "In America," he said, "we have over eighty gates, a number of turnstiles, and a good deal of the ground is unenclosed common." On the question of the regulation of the minimum standard of knowledge by central authority he was not very definite, but he gave some qualified praise both to the Alabama and the Illinois regulations, and expressed the opinion that the tendency was towards greater centralization. Nothing in his address appeared more strange to his English hearers than the statement that physicians' certificates of the cause of death are not required in the United States. In this country it is not too much to say that the death-certificate system is the chief link between the profession and the state, and the root of all our legal privileges. No person can be buried without a certificate of the cause of death, furnished by a medical man who has attended the deceased during life, or by the coroner. This is a great protection, especially to infant life, and has often been the means of bringing crime to light. The medical attendant, if his suspicions are aroused, has only to refuse a certificate to insure an inquiry by the coroner into the circumstances of the case, an inquiry which is, as a general rule, followed by an inquest. At the same time a great body of statistics is brought together. Dr. Billings praised the work in vital statistics done for the English government, and, indeed, appeared to think it the most valuable contribution which we as a nation make to medical science. But over and above all this, as he was not slow to see, the system is of great advantage to the state and the profession by affording one simple, easily-defined point of contact, as thus: no person can be buried without a death-certificate signed by a medical practitioner; only such certificates are in form as are signed by practitioners whose names appear on the Medical Register kept by the General Medical Council; the Council, appointed in part by the state, in part by the examining colleges and universities, and, in future, in part elected by the profession at large, decides what diplomas shall be sufficient to admit a name to the register. The authority exercised by the Council over the colleges granting diplomas, though circumscribed in various ways, is very considerable, and it will be seen that the basis of our system of state regulation of medical education is the demand by the state that the cause of death of every individual shall be stated by the medical attendant "to the best of his knowledge and belief," or ascertained by the coroner. This system is the terror of the quack and the prescribing chemist, and affords an effectual engine for checking the career of members of the profession who have been guilty of criminal or disreputable conduct involving the removal of their names from the register.

Among the other addresses one of the most original was that of Dr. Broadbent opening the Section of Medicine. It dealt with the remote effects of remedies, their undesired and undesirable effects when long continued, and the injurious effect on the general system which may be produced by treatment directed too exclusively to the relief of some particular symptom.

Dr. Lauder Brunton delivered an address in opening the Section of Pharmacology and Therapeutics, on the connection between chemical constitution and physiological action, which involved many profound chemical speculations, but so clearly stated and ingeniously illustrated that they became comparatively easy of comprehension.

The work in the Sections was in general carried on with great spirit. Sir Henry Thompson's paper on suprapubic lithotomy raised a most interesting debate, and a series of papers on the surgery of the liver, by Dr. George Harley, Dr. Imlach, and Dr. Lawson Tait, were well discussed. Dr. Brown-Séquard, one of the honorary members, spoke at length on Professor Victor Horsley's paper on the surgery of the central nervous system, and another honorary member, M. Charcot, took part in the debate on peripheral neuritis raised by Dr. Buzzard and Dr. Ross in the Medical Section.

In connection with the Section of Public Medicine, Mr. Crookshank, of King's College, made a very elaborate display of the methods of bacteriology. In one room sterilizers, incubators, baths, and other paraphernalia were arranged; in a second room cultivations of fifty different species of micro-organism were exhibited; in another room mounted specimens could be seen under the microscope; and Mr. Crookshank's magnificent collection of micro-photographs received the admiration which they so well deserve.

The business part of the meeting passed off without any hitch, but some complaints were heard that the great mass of work to be got through within a very limited time did not allow sufficient opportunity for discussion.

The Association has been careful to make its honorary membership an honor worth having by limiting very strictly the number of distinguished men upon whom it is conferred. Every name on the roll belongs to a man of European celebrity, or to one who has rendered some special service to the Association. Four honorary members were elected at Brighton. All four belong to the western shore of the Atlantic, and they are the first American names which have been added to the list. Dr. Billings, Dr. Davis, of Chicago, Dr. J. A. Grant, of Ottawa, and Dr. W. H. Hingston, of Montreal, are the four eminent men who have been thus honored. The gold medal for distinguished merit was presented to Dr. Edward Waters, of Chester, for his long-continued, self-denying, and able services in the cause of medical reform. The Stewart triennial prize for the best work in epidemiology was awarded to Dr. Robert Cory, who paid so dearly for his zeal in the cause of epidemiological research. The Middlemore prize for the best essay on the advance of ophthalmological science during the last three years was divided between Mr. Adams Frost and Mr. G. Berry. The Association has at length obtained premises more suited to its needs than the wretched little house it now occupies. The offices of the Briton Medical and General Insurance Company, which failed so disastrously to many members of the profession a short time ago, have been acquired by lease, and will afford, it is believed, ample space not only for the business of the Association, but for the printing of the Journal, and perhaps also for a reading-room for members.

After a good deal of discussion, it was decided at the second general meeting at Brighton that the Association should take no part in the selection of candidates for the General Medical Council. It is not possible at present to draw up anything approaching a full list of candidates. Dr. Glover has come forward at the request of an influential meeting, and, backed as he will doubtless be by all the interest of a powerful medical journal, his prospects of success are good. Hardly so much can be said of the chances of the other candidates who will probably seek election,—Dr. Benjamin Ward Richardson, Dr. Morris, of Spalding, and Dr. Bernard O'Connor. As there are three seats, and as other candidates are certain to be put forward,—indeed, a committee was formed at Brighton with this object,—a contested election will assuredly be held in England. In Ireland four candidates—Drs. Jacob and Kidd, of Dublin, Dr. McMordie, of Belfast, and Dr. Laffon, of Cashel—intend to stand for the one seat; but in Scotland no candidature has yet been formally announced. The services which these gentlemen desire to render are not unremunerated. A fee of five guineas a day is paid to each member while the Council is sitting. Travelling and hotel expenses are allowed on a liberal scale, and a fee of two guineas is paid for each attendance at a meeting of the Branch Council to which the member belongs. Altogether, the sum received by the Irish, Scotch, and provincial representatives is probably nearer two than one hundred pounds a year.

Dr. Balthasar Foster was knighted on Mr. Gladstone's retirement from office, and I notice that he evidently prefers to be known in the future as Sir B. Walter Foster. He combines two careers in his own person: he is physician to the General Hospital in Birmingham, and Chairman of the Executive Council of the British Medical Association, but he is also the ex-Gladstonian member of

Parliament for Chester, and Vice-Chairman of the National Liberal Federation. The daily newspapers assumed that the distinction was conferred on account of political services, and the mistake may well be pardoned as the chairman of the Federation, who had also been an unsuccessful candidate at the recent elections, was at the same time made a baronet: a mistake, however, was made, as Sir Walter Foster was careful to say that his knighthood was "in the main" due to the fact that he was President of the Council of the British Medical Association. Dr. William Stokes, the Dublin surgeon and the son of the more widely celebrated physician, has also been knighted.

A most remarkable outbreak of throat-disease, probably to be classed as diphtheria, occurred in Canterbury in July. The local symptoms were inflammation of the throat, with small white patches on the tonsils, and enlargement of the glands of the neck. The general symptoms were generally mild, and most of the patients recovered in two or three days without treatment; but in some cases they persisted for a fortnight, and the patient was left in a weak and prostrate state. No deaths occurred. The outbreak was very sudden, two hundred and thirty-one cases occurring in eight days, and limited to one district, within which all social ranks were attacked. The houses in this district to the number of four hundred and twenty-two were visited, and it was ascertained that cases had occurred in one hundred and twenty houses. An outbreak of throat-illness at Dover in 1884 was traced by Dr. Robinson, the Medical Officer of Health for East Kent, with great probability to the use of milk and cream contaminated with material from cases of aphthous fever in cattle. The source of the milk supplied to the houses in Canterbury was therefore very carefully gone into, with the result indicated in this table:

	Supplied Houses.	Cases.	Non-cases.
A milkman	160	94	66
This milkman and others	36	21	15
No milk	52	1	51
Condensed milk	8	0	8
Various milkmen	166	4	162
Total	422	120	302

It will be seen from the above that ninety-four houses out of the one hundred and twenty that had cases were supplied by one milkman, and that the disease also occurred in twenty-one houses supplied by the same milkman and others. Of the five cases unaccounted for, one drank tea habitually at one of the houses served by the first milkman. Two visited patients suffering from the affection, and one lived next door to houses in which cases had occurred; but in the fifth, a woman subject to sore throat, no connection with the milk or with infected persons could be traced. As the water-supply was known to be good, and as the only circumstance which all the cases (with the above four exceptions) had in common was the milk-supply, Mr. Wacher, the Medical Officer of Health for Canterbury, thinks it "only reasonable to come to the conclusion that the milk was the prime cause of the epidemic." This conclusion is fortified by the fact that the dairyman, his family, and a pet lamb on his premises were suffering from sore throat, and that cases of sore throat had occurred among persons living in a different locality, but supplied from the same dairy. The cows were apparently healthy; but when it is remembered that they were examined after the epidemic had broken out, and how slight, moreover, was the affection of the udders found by Dr. Klein in the cows which are believed to be responsible for the epidemic of scarlet fever investigated recently by him in conjunction with Mr. W. H. Power and Dr. Cameron, of Hendon, much importance cannot be attached to the apparent health of the cows.

I hear that Dr. Lauder Brunton has been compelled, by increasing work in other directions, to resign the editorship of *The Practitioner*, and that he will be succeeded by Dr. J. Mitchell Bruce. Mr. George Lawson, surgeon to the Middlesex Hospital and to the Royal London Ophthalmic Hospital, has been appointed surgeon-oculist-in-ordinary to the queen.

The committee appointed to ascertain why the Houses of Parliament at Westminster have been pervaded by the odor of sewer-gas have discovered most terrible defects in the sanitary arrangements. Sewers and drains will need to be reconstructed, and water-closets and soil-pipes taken down and replaced by efficient apparatus. Possibly, if the House of Commons is able, when it reassembles next January or February, to deliberate in a pure atmosphere, it will accomplish some useful work. Were the heated talk and feverish impotence of the last few sessions in reality symptoms of sewer-gas intoxication?

DAWSON WILLIAMS.

LONDON, August 21, 1886.

BERLIN.

THE establishment of a chair of Hygiene in the University of Berlin, in connection with the Medical Department, marks a new era in medicine. Hitherto sanitation has been under the domain of chemistry, but the researches of Dr. Koch and others of his school have demonstrated that more than mere chemical analysis is needed in determining whether a given water- or food-supply is to be condemned as deleterious or not. The finding of organic matter in a water-supply by chemical analysis only furnishes proof of a *medium* upon which the germs of disease may multiply, but does not demon-

strate their presence. With our present knowledge, however, we not only determine the existence of organic matter, but may also definitely ascertain whether it is contaminated or not, and the import of the infection. To say that Dr. Koch is the father of the present school of hygiene is indeed little enough in his praise, for by his efforts the days of speculation are being supplanted and an exact science is rapidly coming to the front.

Some idea of the importance attached to this new school by the German government may be gathered from what it has done for the new chair. A large and commodious building has been set aside for its exclusive use, and Dr. Koch installed as Director of the Hygienische Institut, as it is called. The title of Geheimrath has been conferred upon him, and he has been elected to the "Legion of the Iron Cross." The latter honor has heretofore been reserved for the army and nobility, and, if I mistake not, Dr. Koch is the first private citizen upon whom it has been conferred. The Germans themselves cannot say too much in praise of him, and his quiet, scholarly bearing favorably impresses all who come in contact with him.

The laboratory was opened for students the 1st of July, 1885, and has now entered upon its second year. The building is much larger than is needed at the present time, but that the increasing interest felt in the new science will soon test its utmost capacity I have no doubt. It is solidly built of brick, in the form of two hollow squares, thus giving the greatest amount of window-frontage possible, and is also well adapted in other respects for the purpose for which it is designed. The first floor is devoted to offices and store-rooms. The second floor is occupied by the private laboratory of Dr. Koch, his lecture-rooms, two in number, the chemical laboratories, and the museum. The latter is, to a large extent, only projected, time being required to accumulate material and apparatus. The third floor is used for the culture and microscopical study of micro-organisms, and the rooms set aside for Dr. Koch's assistants. A portion of the fourth floor is fitted up for photo-micrographic work, and the remainder is devoted to the animals upon which experimental inoculations are performed.

The laboratory is so thoroughly supplied with the very best apparatus that it is a real pleasure to work in it. Of the thirty students, mostly M.D.'s, who are availing themselves of the advantages of the laboratory, the majority are Germans. In the next room to mine was a Japanese, who seemed to be doing good work; and it may be remarked here, parenthetically, that quite a number of Japanese are to be found in the universities of Germany. The class-instruction is given by the assistants of Dr. Koch, Drs. Petra, Esmark, and Fränkel, who each take turns,—one teaching the class one month, another the next, and so on. They are thus enabled to get material ahead, and have time besides for original investigation.

Such students as are willing to devote an entire semester to the study of mycology are assigned some special topic by Dr. Koch, and receive daily instruction from him. Much good original work is being done under his direct supervision. The etiology of tetanus is at present engaging the attention of several students. The micro-organism found in this disease is an anaërobie,—that is, one which will not develop in the presence of oxygen. Many methods have been tried for its culture, but with only partial success. Recently, Dr. Esmark has invented a new process by which the culture will be considerably simplified, and at the same time it meets all the requirements in the case and promises to give better results. He inoculates tubes of gelatin in a manner similar to those for plate-cultures. The cotton wad is next trimmed closely, and an india-rubber cap fitted over the top to prevent ingress of water and air. The tube is then placed in ice-water and turned rapidly. The melted gelatin is thus cooled in a thin layer coating the inside of the tube. When a sufficient thickness is attained, the tube is inverted, and the remaining gelatin is allowed to run down upon the cotton wad and solidify. This method has been found to act very nicely for many micro-organisms of this class, the small amount of oxygen contained in the hollow of the tube not interfering with their development; but for those forms which require the entire absence of oxygen another plan must be adopted. Instead of a cotton wad, a rubber cork is used, through which two small glass tubes extend into the centre of the culture-tube and are also allowed to project sufficiently for the attachment of rubber tubing. These smaller tubes must be plugged with sterilized cotton. The corks may be previously placed in sublimate solution. After inoculation the gelatin is allowed to cool by turning the tube, as before described, in ice-water, care being taken not to close the ends of the smaller tubes with gelatin. These now project into the hollow space in the centre of the culture-tube. As many tubes as are to be included in the experiment are now connected by rubber tubing, and a continuous current of hydrogen or carbonic acid gas allowed to pass through them. The colonies will appear in the thin layer of gelatin coating the inside of the culture-tube, where they may be examined either with the microscope or with a hand magnifying lens.

Dr. Esmark has also had an instrument made for counting the number of colonies in a given quantity of gelatin contained in a tube, and so estimating the number found in the water or other fluid examined. It consists of a holder for the tube, fitted with suit-

able clamps. To this is attached a slide in which are cut squares of definite sizes, and above which is arranged a hand magnifying lens of sufficient strength to enable one to count the number of colonies and also examine their physical characteristics. The examination, on the spot, of a suspected water-supply is a matter of easy accomplishment by Dr. Esmark's method. One can take with him a number of sterilized tubes and make cultures, allowing the gelatin to harden on the inside, forming a thin coating, as described for the culture of anaërobie, but without inverting the tube. The inoculated tubes may be cooled by turning them in a running stream of hydrant-water, as well as in ice-water. By this means the liability of contamination is largely done away with, and colonies may be fished, with a little practice, from the inside of the tube with as much certainty as from off a plate-culture. These fished colonies may be introduced into fresh tubes, and pure culture prepared which can be taken home to be studied at leisure. The advantages of this method will be apparent at once to those who have done work in mycology.

Nothing new has been advanced during the past year regarding the tubercle-bacillus. No one has been able to demonstrate any spores in connection with it, and there exists considerable room for doubt regarding their presence, but all are united in attributing the direct cause of tuberculosis to the bacillus. The same confidence is expressed by those who have worked on the "comma-bacillus" regarding its direct connection with cholera. Its specific action, which at first they were not able to show, is now easily demonstrated. The process consists in first rendering the contents of the stomach alkaline, and injecting morphine under the skin in order to suspend the production of acid by the gastric glands, and then introducing the germs into the alimentary canal by the mouth. The cultivation of the comma-bacillus by students in the Hygienische Institut has been forbidden by the government.

Experiments are being made continually in the direction of preventive measures, both as regards therapy and hygiene. The latter field promises more than the former. As a rule, any drug that will destroy micro-organisms when once introduced into the system will have a deleterious action upon the tissues.

Bacteriological therapy, as practised by its adherents, has given little or no positive results; and Dr. Koch does not look forward with any degree of confidence to inoculation ever being available as a therapeutic agent or as a preventive measure, but holds that by reason of the advance in our knowledge regarding the etiology of disease we are able to establish better hygienic conditions and thus prevent the spread of disease. Already much has been accomplished in bettering the sanitary conditions of corporations, and more will be done in a private way as the masses become convinced of the necessity for such measures. Sanitary science will become better understood, and a new school will come forward composed of medically-educated men.

The German government, with its Hygienic Institutes at Berlin and Göttingen, has taken the initiatory step. England is not far behind, although not generally considered so thorough as Germany. A society has been recently formed in London, composed, as set forth in its name, of medical men qualified in sanitary science. It numbers ninety-five members, who are furnished by the universities of the United Kingdom of Great Britain and Ireland in the following proportions: Cambridge University, sixty per cent.; Edinburgh University, twelve per cent.; Dublin University, seven per cent.; London University, five per cent., etc., the other universities following with a small percentage each. The society represents one-half the entire number qualified in sanitary science in Great Britain and her dependencies.

While the number is small, yet it shows that the universities of England are alive to the needs of the hour. In our own country the question has not been so fully discussed, yet several of our universities are awaking to the demands of the times. The School of Mines of Columbia College has had for several years a department of sanitary engineering. I had the pleasure of attending a course of lectures there in 1883, given by Professor Billings, U.S.A., on the etiology of zymotic diseases. Johns Hopkins University has a finely-equipped biological department, with Professor Welch at its head, where a student can work out almost any phase of the subject he desires. Yet, so far as I am acquainted, there are no institutions in our country that have hygienic departments that approach those of Germany. Germany is the natural home of hygiene, and it is evident to even the passer-by. Her streets are clean, and her water- and food-supplies are well looked after. The subject of public sanitation has long been a matter of solicitude, but it is only within a few years that sanitary science as applied to domestic life has been forced upon our notice. The State of Illinois has taken the lead in this matter, by requiring the addition of the chair of hygiene to the faculties of her medical colleges, and also requiring an examination in hygiene of the graduates of other schools who desire to practise within her borders.

Our universities and medical colleges will have to follow in the footsteps of other universities and establish chairs of hygiene and endow them sufficiently to make them independent.

Government, State, and city boards should be appointed to look after the sanitary condi-

tion of our water- and food-supply, as well as our drainage. Too little attention has been given to food-stuffs. Cases are upon record where the milk-supply has been the means of infection, and I firmly believe that if attention were directed to this source more instances would be recorded. In the past we have depended too much on our examinations of water-supply, while the food, and especially the milk-supply, has been almost or entirely overlooked. It is a well-known fact that milk furnishes a much better medium than does water, in which the small percentage of organic matter alone provides nourishment for the development of disease-germs. Too little attention has been given in America to food-supply as a source of infection. Laws should be passed requiring physicians to make all cases of infectious diseases—using the term in its broadest sense as now understood—a matter of record. This record should show the connection, if any, with food-supply; a careful examination should be made into the origin of the infection by competent boards composed of medically-educated men qualified in sanitary science. If the family in which the patient is found is in any way connected with the food-supply, then this board should have power to declare a quarantine not only against the family but against the food-supply furnished by them, especially if it consists of dairy-products, vegetable or fruits. These small dairymen and truck-gardeners are not able to employ nurses in case of sickness, hence the extra danger of infection. The family have double duty thrown upon them, and cannot observe even ordinary care. If they have a dairy, the dairy-utensils are liable to become infected, and the milk-route will be the means of extending the infection, be it cholera, cholera morbus, typhoid fever, or any kindred disease. I have no doubt that many a case of cholera infantum could be traced to such sources if the effort were made. The question naturally arises as to what may be done in an antiseptic way by private individuals regarding food-stuffs. The only sure means is found in thoroughly cooking whatever is to be eaten. Little or no *raw* fruit should be used. Small dealers should be avoided, especially the street-stands conducted by Italians, who are notoriously careless in their habits. If raw fruit is wanted, it should be purchased in crates or boxes that have been put up in the country, where fewer disease-germs exist than are found in cities. If milk is used as a beverage, it should be bottled in clean flasks at the dairy, and not be opened by the delivery-man. A very good way has been adopted here of sealing each flask at the dairy. The middle-man is thereby prevented from tampering with the contents, and a pure article is secured. I bespeak a large custom for any and all dairymen who adopt this German plan. If it is not possible to secure the above conditions, then the milk should be boiled for several minutes. To many persons the thought of the possibility of food-contamination is repulsive; and on that account they are careless regarding the matter. The facts, nevertheless, stare us in the face, that the germs of disease are all around us: over thirty forms have been discovered that are pathogenic when brought into the system under favorable conditions for development.

The conditions are not always suitable, so that disease is not always insured when germs are present. Then, again, a large number are self-limited in character, producing certain changes in the media in which they grow that cause an arrest of further development. Those most to be feared, however, are the ones which are most liable to infect our food-supply and produce the long line of diseases of the alimentary canal, such as typhoid fever or cholera.

Let us, then, as a nation, as corporations, and as individuals, arouse from our apathetic condition and improve our hygienic surroundings, and thereby anticipate disease. By so doing we will add to the length of our days, and increase our ability to enjoy them. In the light of our present and ever-increasing knowledge regarding the etiology of disease, our therapeutics will take more of an antiseptic turn, and the "shot-gun" prescription will become a thing of the past.

W. Xavier Sudduth, M.D.

August 16, 1886.

AIX-LES-BAINS (SAVOY), FRANCE.

August, 1886.

THIS year we send some vacation notes from this delightful health-resort. Dr. John M. Keating (*Philadelphia Medical Times* for July 10), in his interesting lesson on "Therapeutics of Natural Mineral Waters," finds that it is an attractive subject to study, and speaks of the foreign spas, with their thousands of visitors from all lands. He also truly says that the mineral water alone, like other medication, is of comparatively little value unless applied with proper method. Finding ourselves in what is perhaps the most systematic watering-place in the world, we feel inclined to return to our last year's remarks in regard to United States mineral-water stations, with the object of encouraging improvement in them by investigation and comparing them with the European methods. Dr. Hermann Weber, of London, in volume iv. of Von Ziemssen's "Hand-Book of General Therapeutics," gives considerable notice to the prominent mineral springs of France and Europe, and it would rather astonish many American physicians to see the large number of doctors and patients who flock to Dr. Weber's office to consult him as to the

choice of a mineral spring suited to their patients or complaints. The hope was expressed in a late number of the *Times* that Dr. Weber's late work would stimulate Americans to renewed exertions, particularly those who are engaged in the investigation of the resources of United States mineral springs. In view of the general scepticism in regard to the therapeutic value of many drugs, and the certain, proved efficacy of mineral waters, it certainly seems to be a subject that has been much neglected in American medical schools, none of the therapeutical professors giving it the attention it deserves. At the same time, the springs are notoriously badly conducted in a medical point of view. France alone has over five hundred of these mineral springs in use; and in a rough calculation there is no doubt that at least two hundred thousand people visit them every year. Aix-les-Bains and Vichy alone receive fifty thousand visitors. The percentage of cures is not given, but it may be stated as a fact that almost every one is greatly benefited in health. Change of life, etc., may be of great value in this, but the waters must also count for a large part in the improvement, for accumulated evidence is too strong to allow any serious doubts on this subject. Many French patients reside but a short distance from the springs, and are as readily cured as those who come from America: so that change, etc., cannot be invoked in these cases: the really efficient power of the waters themselves remains; so that throughout Europe in summer-time the railways are crowded with people, not on the way to some local Cape May or Atlantic City, but to some one of the mineral-water stations. Why should it not be so in America? Surely the springs exist. It is curious that practical people like the American doctors have not as yet derived all the benefit that can be obtained from this form of treatment. In the broad extent of our own country there certainly exist many rich mineral springs as good as any that are to be found in Europe; and now that many in the profession are getting sceptical in regard to chemists' mixtures, recourse should be had to nature's laboratory. The waters and stations exist; doctors are plenty; advertising capital in our enterprising land will not be lacking. It only remains, to our thinking, to adopt a scientific method of using the waters and reporting the results, just the same as we do when any other medicine is prescribed; but the general public will want some guarantee that it is worth while to go to such and such a place for treatment, and they will want to see that our best medical men visit and have representative brethren in these places. Our State governments, urged on by our highest medical authorities, should adopt some such system as that for instance in force in France: then, and then alone, will the masses take an interest in our mineral waters.

In France the *law* requires that a mineral spring shall not be worked or used medically or commercially without a *special authorization* from the cabinet officer in charge of the state department of the government who superintends this matter, and he only grants this permission *after* a favorable opinion has been pronounced by the Academy of Medicine, which body is first of all informed by the land-owner when a mineral spring is discovered. They then appoint a committee of chemists to examine into the merits of the water. They direct an examination and analysis of the water, and afterwards report on the advisability of its use for medical purposes: they can also stop the working of a spring if it does not satisfy sanitary requirements. Official regulations fix the constitution and inspection of all mineral waters. A *medical inspector* is appointed to the locality, who exercises a constant surveillance over the springs, making reports to the department. He cannot, however, restrain the liberty of patients to follow the prescriptions of their own physicians, or others who may choose to practise at the springs. The medical inspectors are not allowed to have any pecuniary interest in any of the establishments over which they exercise a supervision. They are usually practising physicians of the place, and have a small salary as well. The price charged for the water and the baths, etc., is regulated by government laws, and a certain tax is paid by the owners of the springs to government. So European mineral-water establishments offer a double guarantee to the public: first, an *official analysis* which is *obligatory* before their use is authorized, and, next, the constant supervision of medical inspectors appointed by the state. Let the medical men of the United States join together and have their Congressmen file a bill to put our medical springs on such a basis, or let each State pass laws to control its springs, then it will be worth while for good medical men to pass the season at these stations, and the public will flock *to them*, for it is well established in Europe that *bottled mineral waters do not* preserve their value (notwithstanding Dr. Keating's opinion). One of the best hydrologists in France says, "It is certain that at most only the first glass of bottled mineral water retains any value; and, as one cannot drink all the bottle up at once, the rest may be thrown away." So it is here at Aix: the company advertises that the bottled waters export well and retain all their virtues, but they don't sell one hundred bottles a year in France, as no doctor will advise it.

But to return to Aix-les-Bains itself. It is one of the most important and popular health-resorts in Europe, as there is a happy combination of beautiful mountain-scenery, blue lake, with picturesque gorges and delightful climate, added to mineral springs possessing valuable properties. It is on the principal

line to Switzerland and Italy, nine and a half hours by express from Paris. The hot sulphur springs are two in number, rising from a great depth below the town, under the rocks of the tertiary period: their temperature varies from 114° to 117° Fahrenheit. Their chemical composition differs from the springs in the Pyrenees, as they have but little carbonic acid gas. One peculiarity about the waters is that they contain a nitrogenous substance termed *glairine* or *barégine*, which gives them an unctuous, oily feel, and, the doctors here believe, permits their absorption by the skin, particularly as the great system here is the douche combined with massage. External treatment seems to prevail, although many drink the water also, and use it in spray. The maladies mostly treated here are those depending on a rheumatic, gouty, or scrofulous diathesis. It would require too much space to dwell on the number of diseases that are benefited by these waters. Let us simply say that every advantage is taken of the *heat* of the waters, and the shampooing process performed by the celebrated *masseurs* here most materially adds to the action of the temperature and mineralization, forming a mighty trio, working most harmoniously for the common good. Many hundreds of our countrymen come here, and thousands of English: so that it is quite an Anglo-American place. Twenty-odd thousand patients are treated yearly, and double the number visit here. Some twenty-five doctors, among whom are the well-known names of Brachet, Cazalis, Monard, etc., practise here, and there are also two Englishmen settled in the place, Drs. Wakefield and Rendall. The thermal establishment is one of the largest (only Aix-la-Chapelle can compare with it) in the world. Over three thousand bathing-operations are performed daily. Space fails us to tell of the many and varied amusements provided at two theatres, where all the usual Casino attractions are to be found, including baccarat, while several bands of music are employed to enliven the spirits of the patients.

THOMAS LINN, M.D.

PROCEEDINGS OF SOCIETIES.

THE AMERICAN DERMATOLOGICAL ASSOCIATION.

(Continued from page 904.)

THIRD DAY, FRIDAY, AUGUST 27, 1886.

Morning Session.

DR. J. L. GRAHAM, of Toronto, Canada, exhibited some specimens from a case of ainhum.

The first paper read was by Dr. S. SHERWELL, of Brooklyn, entitled

REMARKS UPON, AND QUERIES AS TO THE RELATIVE FREQUENCY OF, MOLES OF THE HEAD AND FACE, AND THEIR PATHOLOGICAL CHANGES.

The history and etiology of this class of affections are very slightly referred to in works on dermatology, but the author's experience had led him to pay especial attention to these formations. Upon looking up the statistics of one of the institutions with which he is connected, he found that in a period of eighteen months he had seen forty-seven cases suffering with neoplastic and hypertrophic growths. In thirty-six of the cases the growths occupied the face and head. In eleven cases only were the growths found on the body and limbs. Seventeen of the cases in which the growths were on the face were classed as epithelioma. It might be urged that the exposure of the unclothed portions of the body would lead to the formation of neoplasms and the occurrence of destructive activity in them. If that were so, why should not telangiectasic deformities, nævi, etc., undergo degeneration? The speaker had never seen malignant action or what simulated it in such growths. Mechanical irritation of the parts might be considered one reason for the frequency of these growths and their malignant tissue-alterations, but other parts of the body would seem more exposed to irritation than is the face. Moles and similar growths, though common on other parts of the body as well as on the face, yet in other situations seem less likely to undergo destructive pathological changes. The field electively most inimical to the presence of these growths, and of destructive activity in them when already present, may be bounded thus: a quadrangle just taking in the lower lip, the corners of the mouth, extending back to the ears on both sides, vertical lines extending upward to about an inch above the supra-orbital ridge, united by another horizontal line. Of the space thus included, the vicinity of the eyelids and bridge of the nose was, in the author's experience, the most frequent seat of their growth.

The most rational explanation for the frequency of these growths in the situations described is the nature and abundance of the circulatory nutrition, which must favor hyperplasia. If, however, we accept the above hypothesis, why should these errors of the capillary system—such as nævi—not oftener degenerate? He had often operated on these latter deformities, even causing much irritation, but had never seen more than a slight keloid change result. The speaker then referred to the special danger of malignant degeneration which attended the presence of moles in persons of advanced life.

In regard to treatment, he stated that he had operated on these growths in many ways, and had come to the conclusion that, when malignant action is either present or sus-

pected, the application of Volkman's curette, followed by the potential cautery, is the most efficient and easiest method of treatment. Of all escharotics, he preferred the liquor hydrargyri nitratis.

DISCUSSION.

Dr. I. E. ATKINSON, of Baltimore: The probable explanation of the frequency of the presence of moles, etc., upon the face as compared with other portions of the body is that when in this situation patients seek relief, while when covered with the clothing attention is not attracted to them. We should expect that sebaceous new growths would be more commonly seen upon the face, because there we have the greatest activity of the sebaceous apparatus.

Dr. JAMES C. WHITE, of Boston: I think with Dr. Atkinson that these new formations referred to are not more frequent on the face than on other portions of the body. That they undergo degeneration and form epitheliomatous new formations on the face more frequently than on other parts of the body I think cannot be doubted. In regard to the possibility of angiomatous new formations undergoing degenerative processes, I have never seen them undergo the so-called malignant change, but they do undergo degenerative processes tending to a spontaneous cure.

I formerly used the liquor hydrargyri nitratis to a large extent, but within recent years I have used the concentrated nitric acid, and seem to obtain about the same effect.

Dr. E. B. BRONSON, of New York: I think that in the cases of syphilitic growths the mercurial preparation is more active than the pure nitric acid, and tends to promote more rapid absorption.

Dr. L. N. DENSLOW, of St. Paul: With reference to the caustic, I may say that for the past year I have used a solution of one drachm of bichloride of mercury in one ounce of traumaticine. Its application is not painful at first, and does not excite inflammation for some time. It is particularly useful in the case of children.

Dr. R. W. TAYLOR, of New York: The author is to be congratulated upon the clear manner in which he has called attention to the danger of these various growths upon the face in a person over forty-five years of age. Such growths are very prone to assume malignant action. In the same connection, it may be remarked that any inflammatory mass about the prepuce, particularly if the result of anterior lesion, should in old persons always be ablated.

Dr. W. A. HARDAWAY, of St. Louis, then read

NOTES OF A CASE OF EXFOLIATIVE DERMATITIS (PITYRIASIS RUBRA?), WITH BULLOUS LESION.

February 21, 1886, the author was called to see Mrs. A., with an annoying disease of the skin. The patient was 45 years of age, stout, and somewhat nervous; she had always been healthy; the present disease came on February 1, after a night of fatigue and exposure to the night-air; the following day a red patch appeared on the pit of the stomach; other patches developed soon, running together, leaving no healthy skin between; there was very little scaling at first, and no moisture; there was some degree of pruritus. When seen by the author, the chest, arms, back, and thighs presented the usual appearances of pityriasis rubra; there were neither moisture, crusts, nor appreciable infiltration; the skin was shining and of a violaceous hue. In the morning a handful of scales could be gathered from the sheet, but they were not as large as is usual, and were inclined to be furfuraceous; the face was not involved. Three or four days after the first visit, there appeared upon the thighs, abdomen, and buttocks a number of tense bullæ; their appearance was preceded by a distinct chill and followed by a moderate elevation of temperature; the blisters did not run into one another; the bullæ appeared in successive crops of not more than a dozen, each crop being preceded by a chill. Quinine was freely administered, and at the end of a week the bullæ ceased to appear. Dr. Hardaway was obliged to discontinue his visits at this period of the case, but the patient gradually improved.

The writer thought that this and other cases which he had seen showed that diseases usually supposed to run a dry course may, under certain circumstances, be complicated with lesions containing fluid.

Dr. G. H. TILDEN, of Boston, Massachusetts, presented

A CASE OF PROBABLE TUBERCULOSIS OF THE SKIN.

The patient, a healthy-looking boy 2 years of age, was first seen in July, 1885. The only lesions were six or eight cutaneous lesions scattered over various parts of the body: these were about the size of a split pea, slightly elevated above the level of the skin, of a bright red color, which disappeared entirely on pressure. These nodules were hard to the touch, with borders of sensible infiltration. These lesions had appeared within the previous five months, and had been very slow in growth. During the previous three months there had been failure in appetite and strength, and the child had an indisposition to walk. He was under observation for three months, during which time one or two fresh nodules appeared. In nearly all the older ones there ensued softening with formation of pus, which discharged and was followed by cicatrization. About two weeks after the first visit a fluctuating swelling of the size of a hen's egg made its appearance on the inner side of the left thigh over the knee-joint, but not communicating with it: this was opened and pus dis-

charged; it healed within a week. The general health became visibly affected. In November there appeared on the left buttock a swelling which gave an obscure sense of fluctuation; in the proximal phalanx of one finger there appeared a pyriform enlargement resembling that seen in dactylitis syphilitica. The child was again seen in February. The swelling in the buttock had increased in size, and there was more fluctuation in it; there was at this time sufficient outward curvature of the lumbar vertebræ to justify a diagnosis of Pott's disease. In his remarks with reference to the case the speaker said that in the outset the diagnosis of the nature of the cutaneous lesions had been impossible, but from the subsequent course of the disease he thought the most probable diagnosis to be tuberculosis of an unusual form. In arriving at a conclusion the following affections were considered: furunculosis, erythema nodosum, sarcoma, and syphilis.

Dr. LE GRAND N. DENSLOW, of St. Paul, made a supplementary report with reference to

THE TREATMENT OF ACNE BY THE USE OF SOUNDS.

At the last meeting he had reported five cases in which this plan of treatment had been of value. Four of these cases were adults, and all had remained well. The fifth case was that of a boy about 13 years of age, and in this case relapse had occurred.

Dr. S. SHERWELL, of Brooklyn: I have treated cases of acne with the use of sounds, and I believe that it does good. I employ this method as an adjunct to other treatment. I of course do not use it in all cases.

A communication with reference to the organization of a Congress of American Physicians and Surgeons was received, and the following Committee of Conference, to report at the next annual meeting of the Association, was appointed: Drs. H. G. Piffard, of New York, F. B. Greenough, of Boston, R. B. Morison, of Baltimore, G. H. Tilden, of Boston, and Le Grand N. Denslow, of St. Paul.

The following officers were elected:

President.—Dr. H. G. Piffard, of New York.

Vice-Presidents.—Dr. F. B. Greenough, of Boston; Dr. R. B. Morison, of Baltimore.

Secretary.—Dr. G. H. Tilden, of Boston.

Treasurer.—Dr. Le Grand N. Denslow, of St. Paul.

The Association then adjourned, to meet at the call of the Council.

NEW YORK STATE MEDICAL SOCIETY—THIRD DISTRICT BRANCH.

A MEETING of the Society was held at Binghamton, New York. Dr. CALEB GREEN read a paper entitled "Notes on Some Forgotten or Much-Neglected Remedies and Therapeutic Measures" (see page 917).

DISCUSSION ON BLEEDING IN THE TREATMENT OF PNEUMONIA.

Dr. VAN DER WARKER, of Syracuse: I want to protest against some of the ideas quoted from Dr. Hartshorne. I do not believe for a moment in the lessening of the resisting powers of the human race. I think, on the contrary, that the whole history of present medicine shows that the resisting powers of the human family are increasing in the same ratio as its longevity is increasing; its improved hygiene, improved modes of life and intellectual life, the wider sphere of their moral and physical usefulness, have conduced to increase the resisting powers of the human race. We are making successful surgical operations to-day that would have appalled the profession fifty years ago, from which they would not have believed a human being could recover. The statement that the race is deteriorating is utterly disproved by the fact to which I have just alluded, and yet that idea is used to explain why antiphlogistics are not used to the same extent that they were in former times. We now appreciate better the extent to which venesection is available: just as in the use of mercury, if it appears to be less used to-day than thirty years ago, it is not because we have less regard for its value as a remedy, but because we know its limitations, and within its limitations it is used more than it ever was before.

Dr. ORTON: I should like to be allowed to introduce the same test which I introduced into the old State Society about a quarter of a century ago, and make the same request which was granted at that time. I asked two questions, and I should like to ask the same questions to-day in reference to this matter of venesection. "Those members of the profession present who can remember any case in which they employed venesection and which caused them to regret that treatment will please rise." (None rose.) "Now those members who can remember a case in which they regret not having used the lancet will please rise." (About two-thirds rose; the young members not voting.)

Dr. FERGUSON: In twenty-five years there has grown up a large number of physicians who never have bled, and consequently they could not have regretted using an instrument which they never used. I think every member of the Third District Branch appreciates the scholarly attainments of the author of this paper, and the training he brings to bear upon any subject he takes hold of; but in regard to bleeding in connection with pneumonia I think we must bear in mind the fact that pneumonia in the healthy adult, occurring in rural districts, at least in my observation, is a disease tending intrinsically to recovery, except in the broken-down, the inebriate, and the very old. I do not recollect now that I have ever seen a fatal case of pneumonia in my practice. I know the nat-

ural tendency is to recovery, and whatever views we may take of the pathology of pneumonia,—whether we lean on the side that it is a disease depending on a specific cause (and certainly I think the majority of us now will take this view), or whether we regard it as an inflammation,—the patient has a certain battle to go through with. If bleeding can be shown to limit the duration of the disease, or elide from it any special risk, then it is a measure to be resorted to. There is no question of its power to relieve the pain; but the hypodermic injection of morphine will do the same. I have bled in pneumonia, and I have not been in the practice of medicine quite twenty-five years. I have seen it relieve the pleurisy, but I have seen an injection of morphine do the same. Whatever will contribute to the patient's comfort will probably contribute to his ability to cope with the disease.

Dr. C. W. BROWN: I was very much interested in Dr. Green's paper. I can say that I have tried bleeding in pneumonia in the early stage when I believe it benefited my patient. I have seen other cases where I think I have regretted bleeding in pneumonia. But as regards cases of apoplexy I have bled quite a number where I believe I have saved their lives by bleeding. I am morally certain that they would have died if they had not been bled,—and that in the face of the fact that the first five cases I bled all died; but others since that time I believe have had their lives saved by bleeding. On account of the prejudice against it, many times it happens that cases which should be bled are not bled by the attending physician, when his judgment really teaches him that that is the thing to do.

Dr. F. W. ROSS: I can hardly let this discussion pass without saying something in regard to the matter of bleeding. So far as I am concerned, I know that when I entered into practice I never had seen a patient bled. I remember the first time I bled a patient, and I was gratified at the result. About three weeks ago a case occurred in which there was a question of bleeding. It was one of those terrible conditions we sometimes meet of puerperal eclampsia, and, being without a lancet, I took a bistoury and opened a vein in the arm. The convulsions ceased, and, although the woman was insane for a week or ten days afterwards, she ultimately recovered; and I believe there was nothing that saved the woman aside from the full bleeding. If she had used chloroform or morphine without the bleeding she certainly would have died.

I think, as a general rule, that practitioners are afraid of the public in regard to the use of the lancet. I know the first time I bled I was timorous for a week for fear the patient would die; but the patient recovered.

I had a conversation with a doctor who had a case that required bleeding. I have no doubt that the doctor neglected his duty for fear of public sentiment; I think it is a wrong idea; and the younger members are more afraid than the older members. I never saw a case of a plethoric woman with pneumonia where I did not regret not having bled; and in this case of eclampsia the words came back to me of Dr. Ramsbotham: the condition and aspect of the patient seemed to cry out to you, "The lancet! the lancet! nothing but the lancet!"

Dr. JEWETT: I believe when we bleed for the purpose of avoiding pneumonia we do not bleed as they bled formerly: we bleed inefficiently; we do not bleed enough; we bleed fearing that we shall over-bleed them. I believe that the failure in bleeding is more often from timid bleeding than from the bleeding itself.

Dr. BIRDSALL: I see pneumonia as it occurs in the rural districts. I do not bleed patients, and I never had reason to regret it.

Dr. LESTER: The first four years of my practice were in hospital- and in field-practice in the army; I never bled a man. We had pneumonia in Louisiana. I was instructed in the College of Physicians and Surgeons not to bleed very much; that was in 1860; and then the general sentiment was not to bleed; I never bled a man, except once, all the time I was in the service. Afterwards I came to Northern New York, and those bark-peelers and choppers would have pneumonia that was entirely different from any pneumonia I had ever seen; their blood-vessels were full, and they would die, too; I gave them such things as I did in the army. Dr. Reynolds, of Saratoga, said, "Bleed them." I would be called in the night and find a man suffering intensely, and I would bleed him; and they did a great deal better. I practised there awhile, and then went to Seneca Falls, where I now practise. I have never bled a man or woman in Seneca Falls; I have never seen an occasion to; they are a different class of people, who work in-doors and in shops and in offices, and I can get along without bleeding that class of people; but those men that were full of blood, eating salt pork, and peeling bark, etc., they needed bleeding. I would be governed by the circumstances of the case.

Dr. WHITNEY: I wish to say that in a majority of cases of pneumonia, as far as have come under my observation, a blister laid over the lungs in the early stages of the disease has been far more potent to stop the disease than bleeding. The cases where I would bleed are very few and far between.

Dr. DITTEMER: I think the doctrine today is getting to be that pneumonia is an essential fever, and essential fevers do not bear bleeding very well. If it is an essential fever without a local expression, we do not need to bleed, any more than we do in bilious fever or typhoid fever. It is because it does

have a local expression,—because a certain portion of the breathing apparatus is crippled so that it cannot do its duty. If we bleed in a case of pneumonia it is because a considerable portion—often two lobes and sometimes the third lobe on the other side—is affected, and the circulation in the lungs is greatly obstructed, and the circulation of the blood, which must go on, therefore must go through the lung which is not affected. We bleed not to cut short the disease: we cannot cut it short with blisters, bleeding, or anything of that kind; we do not bleed for the affected side at all: we bleed to save the other one from being affected, because all the blood goes through the unaffected lung which went through both, and it is overwhelmed. Sometimes it occurs in plethoric people, who ought to be bled in any event, whether they have pneumonia or not; we bleed in those cases because if we do not diminish the amount of blood the patient has to succumb. I do not bleed as much as I ought to in those cases; I was one of those who could have arisen and said that there had been cases where I did not bleed when I was satisfied that I ought to have bled. I have seen large, plethoric men who were saved by bleeding simply because the quantity of blood was diminished in the system, and the quantity they had left could be circulated properly by means of a heart weakened by fever. I believe with Dr. Green and with the gentleman from Seneca Falls (Dr. Lester) that we should treat not the *name* of the disease, but the *condition* which is there. Most cases of pneumonia have lung-surface enough, or there is only a small portion of the lung affected, so that we need not bleed. From the fifth to the seventh day it comes to its crisis, and most of the cases recover without any perturbing measures. But when we have a case that requires it we should not hesitate to bleed, whatever may be the fashion or the opinion of our neighbors. I do not think that we should govern our practice because the community says we shall use or shall not use it. I act according to the best of my judgment, and, whether the result be favorable or not, I do not consider myself answerable to the *vox populi* as to whether my treatment or pathology be successful or not.

Dr. Green: In the first place, I did not fully endorse the doctrine of Dr. Hartshorne, that the vital force of men was lower at this time than in the former age. Bloodletting was a favorite doctrine twenty-five to thirty years ago, since when bloodletting began to be less frequently resorted to in practice. The question as to whether pneumonia is a special essential fever with local manifestation, is not a settled question: so, in my opinion, we must tread on that ground rather lightly. I might have referred to the use of the lancet in a great many other instances, as in the puerperal cases they have referred to. I should also have referred to the question of bleeding in cerebral diseases, and even where cerebral hemorrhage has taken place, where one side is paralyzed: some say there is no use in bleeding, because the mischief has already been done. To be sure, we cannot stop the extravasation which has already taken place; but we can limit the amount of blood that will be poured out. And it will not be limited if we do not stop that bounding pulse. Three or four years ago an old man, eighty-seven or eighty-eight years of age, was found early in the morning in a comatose condition, and when they got him into the sitting-room on the lounge or wheeled-chair it was observed that he was paralyzed in one side. I found him several hours afterwards. (He lived five miles out in the country.) His face was flushed, his whole head was flushed, his pulse was full and bounding hard. What should I do? Here he was. The question was whether he would live or not; but I would give him the chance by bloodletting. I put in the lancet and bled him liberally, and his senses began to return, his face began to assume a more intelligent appearance, and the old man recovered, not from his paralysis, but it saved the man from instant death. In an hour or two he would have been dead from the effusion of more blood from this condition of the circulation at the time. I should modify the views of Dr. Hartshorne if I were editing the work. Here was a most marked result: all the indications for bleeding, and yet complete paralysis of one side.

I have not had time to go into the methods of bleeding here, or the results of bleeding. I do not always bleed in pneumonia. In a good many instances I find that it is not necessary. I find but few cases where blisters are not of some service. As I indicated to you, in answering the question of Dr. Orton, I regret many times I had not taken advantage of bleeding to arrest the violence of the inflammation. And although in a certain proportion of cases it terminates by crisis, yet in many cases it will go on, and especially if a large portion of the lung is involved is the case likely to prove a protracted one. If in any case we diminish the amount of effused material and limit the exudative area, we will shorten the term of the pneumonia. Of course, in speaking of the efficacy of the lancet it is understood that it is to be used with discrimination in all cases. But I wrote this paper partly to indicate to our younger members that a valuable agent for relieving and limiting the extent of pneumonia was had in bloodletting.

Dr. Lyman: Some ten years ago Dr. Flint read a paper in Albany on pneumonia, and that was the first I had ever heard of its being a specific fever. Before that we had different kinds of pneumonia,—typhoid or bilious pneumonia and acute pneumonia,—which required

different treatment. Those that did bleed can remember cases where they did not dare to bleed; if they did, the cases were sure to die, and pretty apt to die anyway. But in ordinary acute pneumonia it was rare for a person to die. And many times we bled three or four times during an attack. But the disease now, I think, is more of a typhoid nature. I believe there is a difference in the disease generally.

Dr. GREEN: As an instance of its former prevalence, and of the indiscriminate way in which bloodletting was done, a lady some years ago told me of an old physician in Waterford, in this State, where she formerly resided, who bled for everything. He even bled for toothache. When they sent for him, they always got the bowl and bandage ready on the table; they knew he would call for them. As in former times, the decanter of whiskey and the glass and the sugar, etc., were also on hand.

Dr. FARRINGTON: There was just one thing that was said in protesting against the views of Dr. Hartshorne on the endurance of the race, from which my observation and experience certainly differ very much. It would be very gratifying to me to believe that cases of longevity are increasing in the world; but my observation is that it is a mortifying fact that it is not so. And we may take it in our own individual observation, that the children of the parents, take any generation which has been under your observation, rarely attain the age of their parents, and every successive race has less power of endurance than the former. The children have less power to resist disease. The average of life may be lengthened, but extreme longevity and the power of endurance are lessening in my observation, and the American race is deteriorating physically.

COLLEGE OF PHYSICIANS OF PHILADELPHIA.

A STATED meeting was held May 5, 1886, the President, Dr. S. WEIR MITCHELL, in the chair.

Dr. ARTHUR V. MEIGS read a paper on

CONSTIPATION,

in which he directed attention to fæcal impaction, and to the local and systemic disorder to which it may give rise, and reported cases showing that obstinate diarrhœa may be caused by the irritation of a mass of fæces in the rectum.

DISCUSSION.

Dr. J. M. DA COSTA said: A point of particular interest is the occurrence of fever in these cases. I saw the fourth case with Dr. Meigs, and the fact that it simulated typhoid fever so closely is a matter of interest. I have seen a similar case in which there were almost identical symptoms, with an almost identical termination. We see from this case and the others referred to that constipation may cause fever which is continued and may present the symptoms of a low type.

There is another point connected with the occurrence of constipation in fever to which Dr. Meigs did not have occasion to allude,—that is to say, sometimes after low fevers, in which the state of constipation to which Dr. Meigs has called attention occurs, relapse of the fever will be developed by the constipation. We grope around in darkness, wondering what may be the cause, thinking that it is a true typhoid-fever relapse, when by giving small doses of oil or of laxatives both the fever will disappear and the bowels be freely moved. I have seen this state of things keep up for five or six days; and I think that a good many cases of relapse in typhoid fever have their origin in the very condition to which Dr. Meigs has alluded, and to which I now call the attention of the College.

I will go further: I have reason to think that in some of these cases there may be well-developed typhoid-fever symptoms with rash, due to constipation, which will disappear when the bowels are moved. I have seen the same thing after remittent fever. It seems to me that the occurrence of constipation after fever, typhoid or malarial, may lead to the redevelopment of the febrile state, which may be considered a relapse, when in reality it is only the same kind of irritation of the bowels which in Case IV. of Dr. Meigs produced a fever of low type when there was not the slightest reason for suspecting typhoid fever.

Dr. JAMES H. HUTCHINSON: Case IV. was probably not a case of simple constipation, but one of enteritis associated with the constipation. The enteritis was probably the cause of the fever, and not the constipation. In regard to constipation causing relapse in typhoid fever, I think that it is well known that the cases in which constipation has occurred are more apt to have relapse. I have not myself seen a great deal of constipation follow typhoid fever. At present I cannot recall a case of relapse in which it could be attributed to constipation.

Dr. JOSEPH LEIDY made the following remarks on

PARASITES AND SCORPIONS.

I have recently received for examination, from Dr. W. T. Belfield, of Chicago, three little nematoid worms, which, as stated in the letter accompanying the specimens, were referred to him by Dr. R. W. Gelbach, of Mendota, Illinois, who found them in the intestine of young anæmic, but otherwise healthy, cats. Both gentlemen believe them to be specimens of *Anchylostomum duodenale*, and my examination has confirmed this opinion. On superficial inspection I supposed the worms might belong to *Strongylus tubæformis*,

a closely-related parasite infesting the cat. The specimens, however, exhibit the same structure of the mouth as is described in the *A. duodenale* of man. Beneath the upper lip are four strong recurved hooks, and within the lower lip a pair of hooks. The finding of this parasite in the cat in this country renders it probable that it may also infest man with us, and is probably one of the previously unrecognized causes of pernicious anæmia. The occurrence of the same parasite in the cat is also of interest, as heretofore it has only been noticed in man.

I take the opportunity to exhibit several excellent photographs of trichina in the flesh of the pig and in that of a young woman, sent to me by Mr. Eugene A. Rau, of Bethlehem, Pennsylvania. The photographs were accompanied by a letter giving an account of four cases of trichinosis which recently occurred in a family in that town. The pig used was raised at home, and was stated at no time to have exhibited signs of being unwell. Two other hogs, raised on the same place, were examined and found not to be infested. Of the four persons infected, the mother, aged thirty-seven, and a daughter, aged thirteen, died, while the father and a younger daughter were recovering. The photograph of the pork-section exhibits many coiled worms encysted; those from the deltoid muscle of the girl exhibit numerous coiled and a few extended worms, lying loose among the muscular fibres.

Prof. Leidy also read a letter from Dr. V. Gonzalez, of Durango, Mexico, reporting the great prevalence of scorpions in that district, and the frequent fatality of their sting, especially among children, who die in a short time in convulsions. Dr. Gonzalez observes that a bounty is paid for the scorpions, and that some years over one hundred thousand are destroyed, but that they still continue to be abundant.

DISCUSSION.

Dr. W. T. FORBES said: With reference to the second statement with regard to trichinosis, I would ask Dr. Leidy if the description which he gave of the trichina being found in pork, which is contained in the communication which he read before the Academy of Natural Sciences some forty years ago, was not the first description of the parasite being found in an article of diet? I ask this question because it has been repeatedly stated in Berlin that the trichina had been found there prior to that time,

Dr. LEIDY: I believe that mine was the first notice of the parasite occurring in the pig. It had been previously discovered in man. I was led to find it in the pig after having seen it in man. Dr. Goddard noticed it in a subject in the dissecting-room, in this city, several years before I observed it in the pig. The parasite was at first considered to be of no importance. Some years later, in an epidemic of trichinosis in Germany, the parasite was discovered in many of the persons affected, and in the meat that had been eaten. I think that it was Leuckart who made some experiments and referred to my notice of the trichina in the hog. The parasite was first discovered in man by Sir James Paget.

The President, Dr. S. WEIR MITCHELL: Is there anything known of the steps by which this worm referred to in the first communication finds entrance into the system of man, and of the way in which it is supposed to give rise to anæmia?

Dr. LEIDY: It is supposed that the anchylostomum gains entrance to man through the drinking-water, and, if that is the case, the cats probably obtain it in the same way. If cats, in this country, obtain it from drinking-water, it is probable that with us man may do so. It is curious that it should be found in the cat. Generally we find that similar parasitic worms are found only in animals closely related to one another. So far as we know, the Ascaris vermicularis occurs in no other animal than races of men. The cat has its own ascaris, and this is found in various species of cats all over the world. There is another found in the dog, which is also found in the wolf. Again, the ordinary tapeworm of the dog is found in all sorts of dogs. I have a specimen from the wolf in the West, and I have another which Dr. Kane obtained from an Esquimaux dog in the North. As I have said, worms of the same species in the same stage usually infest only animals which are closely related.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

STATED MEETING, THURSDAY, SEPTEMBER 2, 1886.

The President, B. F. BAER, M.D., in the chair.

INTUBATION OF THE LARYNX.

DR. E. E. MONTGOMERY exhibited a set of Dr. O'Dwyer's tubes, the gag, and the instruments for the insertion and removal of the tubes. He related the history of a case of laryngeal diphtheria in which they were successfully used to relieve asphyxia. In consequence of an over-dose of stimulant the tube was coughed out, and had to be replaced, as the child could not breathe without it. The doctor contrasted the difficulties of tracheotomy with the comparative ease of introduction of the tubes, and called attention to the want of success attending the former operation, as parents will not give an early consent for its performance. He had performed eleven tracheotomies before he had a single successful case, and, as

his first intubation case has been a success, he feels strongly in favor of the new operation.

Dr. M. PRICE presented a case of

REMOVAL OF THE OVARIES FOR UTERINE FIBROID.

The case is one of interstitial uterine fibroid, the uterus being about the size of one at the third month of pregnancy, irregular in outline and nodular, and pelvis-bound. The ovaries were displaced backward and incarcerated between the uterus and the sacrum, making it difficult to remove them. The woman had been suffering for four years, and a confirmed invalid during the last one, unable to do any work. Her marital relations had been suspended for over a year, owing to the sickening pain attending any attempt at sexual intercourse. She had to walk with great care, and lie on her stomach while resting or sleeping to prevent a throbbing and sickening pain in the pelvis. A rather exceptional and interesting feature of the case was the absence of profuse and irregular bleeding; her menses were irregular, scant, and pale; her chief suffering was from engorgement of and pressure upon the ovaries. All kinds of treatment had been persevered in for the last three years, and the patient grew worse. She demanded operative procedure for her relief, preferring the risk of death to her suffering. The ovaries were removed July 9, 1886; they were hypertrophied; they were found low down behind the uterus, and contained numerous pus-pockets; the tubes were enlarged, but did not contain pus. With the exception of a suture-abscess, she did perfectly well and made a complete recovery. She is now able to look after her domestic affairs, and is free from pelvic pain and soreness.

No examination of the condition of the uterus has been made since the operation.

REVIEWS AND BOOK NOTICES.

THE PHYSICIAN HIMSELF, AND WHAT HE SHOULD ADD TO HIS SCIENTIFIC ACQUIREMENTS IN ORDER TO INSURE SUCCESS. By D. W. CATHELL, M.D. Fifth Edition. Baltimore, 1885. Pp. 284.

This edition is a decided improvement over the earlier ones, which we have already favorably noticed.

MANUAL OF DIFFERENTIAL MEDICAL DIAGNOSIS. By CONDICT W. CUTTER, M.D. New York, G. P. Putnam's Sons, 1886. 12mo, pp. 161.

The comparative semeiology of diseases of certain regions is considered in such a way in this work as to present the diagnosis between allied diseases in the clearest light, and greatly to facilitate reference.

NEW REMEDIES AND CLINICAL NOTES.

THE CARDIAC COMPLICATION OF BRIGHT'S DISEASE.—At the meeting of the Ohio State Medical Society, held at Cleveland, Dr. J. T. Whittaker read a paper in which the mutual dependence of heart and kidneys was illustrated by cases of Bright's disease.

The essayist commenced by comparing the relation of the heart and kidneys in the human system to that of a force- or feeding-pump and the escape- or waste-water-pipe. Disease of one was, therefore, likely to be followed sooner or later by disease of the other. In this relation the disease might begin first in the heart and be followed by acute or chronic nephritis; secondly, in both heart and kidneys simultaneously, under the operation of the same cause, as in alcoholism, syphilis, gout, in the form of arterio-capillary sclerosis, etc.; and, lastly, in the kidneys, to be followed by pericarditis, much more rarely by endocarditis, but always by hypertrophy of the left ventricle. This hypertrophy, which we now know to be compensatory,—hence to be favored and sustained in every way,—accompanies every case of chronic nephritis except a few cases of extreme debility, where new tissue cannot be supplied. It is not limited to renal cirrhosis, but is found equally in chronic parenchymatous nephritis: in fact, there is no chronic nephritis without it. It is a valuable sign, in that it shows itself early,—in the course of from two to four weeks after the inception of the disease in the kidneys, at which time it may be detected clinically as well as demonstrated upon autopsy.

The various causes assigned for its production were next discussed, and the symptoms—increased tension of the pulse, dislocation of the apex to the left, increased dulness, and accentuation of the aortic tone—were dwelt upon. These symptoms are all the more valuable in that they may all exist in a marked degree in the entire absence of subjective signs on the part of the heart: in the absence of a valve-lesion to account for them they should excite the suspicion of the practitioner at once as to the existence of Bright's disease. So long as this compensation is exact, there is no dropsy, and, as a rule, no uræmia; but so soon as it becomes disturbed with an excess or failure, gross symptoms supervene. Failure is eventually inevitable. It shows itself in the pulse, which becomes weak and quick; next in the lungs, with signs of dyspnœa, bronchitis, asthma, and œdema; lastly in the general system, with anasarca and hydrops of the serous sacs.

The paper concluded with directions for the treatment of dilated heart, and urged the importance of determining the stage of Bright's disease by the condition of the heart.

A Case of Sudden Death from a Blow on the Testicles.—At a recent meeting of the Varna Medical Society, Dr. Ivanoff recorded the following rare case (Bulgarian *Meditzinsko Spisanië*, June 20, 1886, p. 440). A man, aged between 45 and 50, fought with a woman on the street. During the fight the woman dealt a violent blow on his genital organs. The man shouted, "I am dying!" staggered, and fell insensible. The author, who was almost immediately fetched to the spot by a policeman, found the patient lying on his back, motionless, pulseless, and breathless; his face, neck, and scrotum being very red. Not a trace of ecchymosis or any other sign of injury was detected anywhere in the man. Since there seemed to be heard a slight cardiac murmur and a slight tremor to be felt in the carotids, Dr. Ivanoff without any delay resorted to artificial respiration. But neither forty-five minutes' manipulations nor electrization could re-establish the man's breathing. The congested parts soon became livid and every sign of life extinct. At the post-mortem examination there were found only intense congestion of the meninges and brain, congestion of the lungs with numerous punctiform ecchymoses, accumulation of dark-red fluid blood in the cardiac cavities, congestion of the stomach, liver, kidneys, and testicles. Everything else was quite normal. Basing his conclusion on all the facts as sketched above, the author stated (forensically) that death followed from syncope which had been brought about by sudden violent pain caused by a blow on the testicles.—*London Medical Record.*

A Remarkable Accident while Tapping a Hydrocele.—In the *Lancet*, July, 1886, p. 23, a remarkable accident is recorded. M. Loumeau tapped a hydrocele in a healthy man aged 44, and drew off about one hundred and twenty-five grammes of clear fluid. The operator then injected gently sixty grammes of a mixture of tincture of iodine with twice its volume of water. All at once the patient complained of severe pain in the spermatic cord and loins, with cramp in the right forearm. The ulnar border of the right hand then became flexed, the ring and small fingers being completely bent, while the index and middle fingers became flexed at their metacarpo-phalangeal articulations. The thumb also was flexed and brought near the fingers. Exactly the same position was shortly afterwards assumed by the left hand. There were no convulsions nor syncope. After a few minutes the ulnar muscles began to relax, and the index and middle fingers became flexed completely on the hand, which itself became strongly flexed on the forearm. All the muscles on the front of the forearm became hard and contracted. The palmar fascia was strongly retracted, and the palmaris brevis quite tense. On both sides the ulnar affection had given place to contraction of the muscles supplied by the median nerve. The tongue hung loosely in the mouth, and the patient was unable to articulate a sound. The forearms were shampooed, and nearly an hour afterwards the muscles relaxed. The patient recovered completely, leaving the hospital cured in a few days. The author had no idea of the cause of this attack, but attributed it to reflex irritation of the nerves of the serous membrane of the testicle.—*London Medical Record.*

The Influence of Nitrite of Amyl on the Urine.—The statements of Drs. Mya (*vide* the *London Medical Record*, April, 1885, p. 155), A. Macdonald (*ib.*, p. 284), and Giuseppe and Santoni (see the *British Med. Journal*, April 11, 1885) have induced Dr. P. A. Walter (*Vratch*, No. 12, 1886) to undertake a course of very careful experiments on five healthy men, aged from twenty to twenty-eight, in Professor V. A. Manasseïn's clinic. Each experiment lasted four days. For the first two days the subject did not receive any drug; during the next two he inhaled three or four drops of nitrite of amyl four times daily. In two of the men uric acid was determined after Salkowski's method; in the remaining three after three methods simultaneously, — to wit, Salkowski's, Heintz's, and Ludwig's. Urea was determined after Borodin's method, and the whole amount of nitrogen after Kjeldahl-Borodin's method, as modified by Kürloff and Korkünoff. The acidity of the urine was tested by means of caustic soda. The results obtained by Dr. Walter are at variance with those of his predecessors. They are as follows: 1. In healthy subjects the inhalation of nitrite of amyl in the dose stated does not in the least influence the daily amount of urea, uric acid, and nitrogen excreted in the urine. 2. The same may be stated as regards the daily quantity of the urine, as well as the acidity of the latter. It is worth while to mention that the analytical tables adduced by the author unmistakably prove that Heintz's method of determination of uric acid does not give any reliable result, while the figures furnished by Salkowski's method tally closely with those of Ludwig's.

Pigmentation of the Conjunctiva in Addison's Disease.—Armin Huber, assistant in the Zurich clinic, records a case of Addison's disease in which the conjunctiva was the seat of pigmentation. The pigment was deposited in one minute patch on the scleral conjunctiva of the right eye, above the corneo-scleral junction, and on each side in numerous spots along the lower margin of the cornea. The patient was 49 years old, and presented well-marked bronzing of the skin, besides suffering from the gastric symptoms so frequently met with in Addison's disease.

The writer remarks that he is aware of only one other observation of the conjunctiva being pigmented in this disease,—namely, in a case described in Gerhardt's clinic. (*Deutsche Med. Woch.*, xxxviii., 1885.)—*Practitioner.*

MISCELLANY.

HYDRONAPHTHOL.—Dr. Justus Wolff asserts that E. Mercks's statement that betanaphthol and hydronaphthol are identical is a mistake, which may result in the most serious consequences if betanaphthol be used instead of hydronaphthol, "as the first one is a most dangerous and deadly poison, while the latter is an excellent, absolutely reliable, and harmless antiseptic." The poisonous character of betanaphthol has been established a long time ago by such authorities as Kaposi, Neisser, and Piffard, and lately by Max Schwarz, while Dr. G. R. Fowler, Dr. Laurence Wolff, and many others have proved hydronaphthol to be non-poisonous and a most effective antiseptic. Hydronaphthol is distinguished from betanaphthol not only by its physiological action, but also by distinct chemical reactions and by its chemical constitution, as it possesses certainly more hydrogen in the molecule than betanaphthol. Of the several distinguishing chemical reactions the following may be given as an example. If from a diluted iron-perchloride solution two drops are added to an alcoholic betanaphthol solution it becomes of a bright-green color, while the same proportion of an alcoholic hydronaphthol solution of the same strength becomes dark yellowish brown by addition of the same proportion of iron-perchloride solution. Other reactions are also different, and the melting-points—obtained by most careful determinations—are for hydronaphthol 117° C. and for betanaphthol 122° C. These and other facts satisfy the author that hydronaphthol is distinct from the poisonous compound which is known as betanaphthol, and that it is not alphanaphthol nor a mixture of the two last named, and does not contain any of either.*—*Druggists Circular* for September.

IT HAS PROVED ITS RIGHT TO BE.—The Pittsburg *Times* of July 30 says, "The service rendered by the State Board of Health to the people of West Elizabeth in their affliction by the outbreak of fever is an illustration close to home of the usefulness of that organization.

"In such cases people are likely to lose their heads, and to need above everything directions as to what they should do. They call meetings and discuss the perils, but disperse as undecided as when they assembled. The local doctors are usually busy with the sick, and have little time to give counsel as to sanitary arrangements. Besides that, they are pretty sure to differ as to the origin and nature of the pestilence, and as to the best means of suppressing it. The State Board, stepping in with a system of rules concerning the closing of wells and preparation of hospital accommodations, is welcomed as a succorer, and its instructions are the means of restoring confidence and leading to intelligent treatment of the danger.

"The Board has hardly reached the end of the first year of its existence; but what it has done, as at Elizabeth and at places still nearer Pittsburg, in abolishing nuisances perilous to health is sufficient argument for its right to be, and to be amply supported."

THE WHIPPING-POST DEMORALIZING IN ITS EFFECTS ON THE COMMUNITY.—The whipping-post is at work in Delaware, and the Medical Jurisprudence Society of Philadelphia has been discussing the propriety of adopting it in Pennsylvania. The general sentiment, however, was opposed to it. Quite recently twelve convicts at New Castle, Delaware, were punished with the lash. The infliction of the punishment was public, and was the cause of considerable merriment to the spectators. Is is not difficult to believe that the moral effect upon a community is bad, if such spectacles as the whipping of convicts are allowed to be witnessed by the public.

THE DISTRICT NURSE SOCIETY.—We gladly make the following announcement:

A District Nurse Society has been formed for the care of the sick poor in the Third District (Fifth, Seventh, and Eighth Wards) who cannot be sent to the hospital. A trained nurse is provided by the Society to visit those who are ill and give them such care as is needed. The office is at 1030 Race Street.

The Society will also furnish bed-linen and other comforts for the sick. For these services a charge of five cents a day is made, except in cases of extreme poverty. The members of the medical profession are requested to send notice to the Society of those who require a nurse's aid, and with this notice there should be directions for the nurse in case any special treatment is required.

THE SMITH & SHAW ELECTRIC COMPANY manufacture a closed-cell pocket battery which is efficient for most purposes to which a faradic current is applied. It is compact, cleanly, and convenient, as it can easily be carried in the pocket.

DR. CHARLES S. TURNBULL has been appointed Attending-Surgeon to the Clinic for Diseases of the Eye and Ear at the Mathilda Loeb Dispensary of the Jewish Hospital.

* The hydronaphthol manufactured by Seabury & Johnson is claimed to be perfectly harmless and free from toxic or irritating qualities.

NOTES AND QUERIES.

CORROSIVE-SUBLIMATE DRESSINGS AT THE PENNSYLVANIA HOSPITAL.

To the Editor of the Phila. Medical Times:

Dear Sir,—That the great cause of asepsis and its agents may in no way suffer thereby, kindly allow me a word in explanation of the statement in your last issue to the effect that two resident-surgeons of this hospital were upon sick-leave, the result of mercurial poison.

Neither Dr. Penrose nor myself was upon sick-leave: we were simply taking short vacations; although the former had had, previous to his departure, symptoms of ptyalism,—due to working in perhaps needlessly strong solutions of the sublimate. Bichloride of mercury (usually in conjunction with iodoform) is the universal antiseptic of this hospital, and is applied to almost every case where dressing is required, and is also freely used during operations. Internes are almost continually in contact with the agent during their entire term of sixteen months, when in the medical service, assisting at operations, etc.; while during their eight months' surgical service I think that I may safely aver that their hands are *never free from it.* Yet, excepting the slight symptoms in Dr. Penrose's case, there has been no ill effect experienced among us from its use. Save one, the same can be said of our nurses, who, *the year round,* are exposed to it fully as much as ourselves. That one, however, being decidedly sensitive to its influence, has left our employ. *No patient has ever, to my knowledge, been salivated or otherwise affected for the worse through its surgical use in this institution.*

As the onset of poisoning by its gradual absorption is marked by unmistakable prodromes, there can no danger attend such contact of the surgeon with it, much less its use *upon* the patient. Its surgical use internally (washing out abscesses, joints, other cavities, etc.) is, however, a very different matter, for here the utmost prudence and judgment are required; but I am happy to say that, even in this, bad effects have yet to happen with us.

Since Dr. Penrose's return to duty and the use of the standard house solution of the bichloride, he has had no renewal of the annoying symptoms.

I am, sir, Very truly yours,
Thomas S. K. Morton, M.D.

TROUSSEAU'S DIURETIC WINE.

In response to a correspondent, the following formula is given:

℞ Vini albi, 750 grammes;
Scillæ, 5 grammes;
Juniperi, 50 grammes;
Digitalis, 10 grammes.

Macerate for four days, then add

Potassii acetatis, 15 grammes;

and filter.—(Trousseau's Clinical Medicine, American edition, vol. i. p. 705.)

OFFICIAL LIST

OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT U.S. ARMY FROM AUGUST 29, 1886, *TO SEPTEMBER* 8, 1886.

Major P. Middleton, Surgeon.—Assigned to duty at St. Francis Barracks, St. Augustine, Florida, as post-surgeon. S. O. 126, Division of the Atlantic, September 2, 1886.

Captain L. W. Crampton, Assistant-Surgeon. — Relieved from further duty at Bellevue Rifle-Range, and granted leave of absence for one month, to take effect before rejoining his proper station (Fort Bridger, Wyoming.) S. O. 108, Department of the Platte, August 28, 1886.

Captain L. A. La Garde, Assistant-Surgeon.—Upon departure of 3d Infantry from Fort Ellis, Montana Territory, to proceed to Camp Sheridan, Mammoth Hot Springs, Wyoming Territory, and report to the commanding officer for duty, relieving Assistant-Surgeon Pilcher. S. O. 87, Department of Dakota, August 27, 1886.

First-Lieutenant William J. Wakeman, Assistant-Surgeon.—Granted leave of absence for one month, with permission to apply for three months' extension, to take effect when his services can be spared in the Department of the Platte. S. O. 207, A. G. O., September 6, 1886.

First-Lieutenant James E. Pilcher, Assistant-Surgeon.—When relieved by Assistant-Surgeon La Garde from duty at Camp Sheridan, to return to his proper station (Fort Custer, Montana Territory). S. O. 87, Department of Dakota, August 27, 1886.

First-Lieutenant Phil. G. Wales, Assistant-Surgeon. —Granted leave of absence for one month, with permission to apply for an extension to November 5, 1886. S. O. 70, Division of the Pacific, August 31, 1886.

First-Lieutenant L. Wood, Assistant-Surgeon (recently appointed).—Ordered to report by letter to the commanding general, Department of Arizona, for assignment to duty. S. O. 202, A. G. O., August 31, 1886.

First-Lieutenant William B. Banister, Assistant-Surgeon (recently appointed).—To report by letter to the commanding general, Department of Arizona, for assignment to duty. S. O. 208, A. G. O., September 7, 1886.

First-Lieutenant Charles F. Mason, Assistant-Surgeon.—Relieved from duty in Department of the East, and assigned to duty in Department of Arizona. S. O. 203, A. G. O., September 1, 1886.

First-Lieutenant F. V. Walker, Assistant-Surgeon.—Assigned to temporary duty at Fort Adams, Rhode Island. S. O. 131, Division of the Atlantic, September 8, 1886.

OFFICIAL LIST OF CHANGES IN THE MEDICAL CORPS OF THE U.S. NAVY FROM SEPTEMBER 1, 1886, *TO SEPTEMBER* 12, 1886.

Passed Assistant-Surgeon S. H. Dickson. — Detached from the Naval Academy October 1, 1886, and ordered to Navy-Yard, Washington.

Passed Assistant-Surgeon J. G. Lippincott.—Ordered to Naval Academy October 1.

Medical-Director E. Shippen.— Detached from Naval Hospital, Philadelphia, and ordered to attend officers of the Navy and Marine Corps at Philadelphia not otherwise provided with medical aid.

Medical-Director William T. Hord.—Detached from Examining and Retiring Boards at Washington, October 5, and ordered to Naval Hospital, Philadelphia, Pa.

Medical-Director R. C. Dean.—Ordered to duty as member of Examining and Retiring Boards at Washington, October 5, 1886.

Surgeon J. F. Bransford.—Detached from U.S.S. "Iroquois," and ordered to Naval Hospital, New York.

Passed Assistant-Surgeon C. H. H. Hall.—Detached from Naval Hospital, New York, and ordered to Naval Hospital, Yokohama, per steamer of 21st instant.

Assistant-Surgeon C. E. Woodruff. — Ordered to Receiving-Ship "Vermont," October 4, 1886.

Assistant-Surgeon L. W. Atlee.—Detached from the "Vermont," and ordered to the "Quinnebaug," per steamer of 25th instant.

Medical-Inspector E. S. Bogert, Surgeon N. McP. Ferebee, Passed Assistant-Surgeon C. Biddle, Assistant-Surgeon H. B. Scott.—Detached from the "Trenton," and placed on waiting orders.

OFFICIAL LIST OF CHANGES OF STATIONS AND DUTIES OF MEDICAL OFFICERS OF THE U.S. MARINE HOSPITAL SERVICE FOR THE THREE WEEKS ENDED SEPTEMBER 4, 1886.

Bailhache, P. H., Surgeon.—To proceed to Cape Charles Quarantine as Inspector, August 27, 1886.

Fessenden, C. S. D., Surgeon.—Granted leave of absence for thirty days, August 30, 1886.

Godfrey, John, Surgeon.—To proceed to Biloxi, Mississippi, and investigate alleged yellow-fever cases, September 1, 1886.

Irwin, Fairfax, Passed Assistant-Surgeon.—Granted leave of absence for thirty days, September 2, 1886.

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